

PD- AAS-195

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MID-TERM EVALUATION
(March 1985)

GRANT TITLE: WI ASSISTANCE TO PVOs IN ANIMAL AGRICULTURE

MATCHING GRANT NO. PDC-0182 G SS-1026 00
August 21, 1981 - August 16, 1984
Extended to September 30, 1985

AID/PVC & WINROCK INTERNATIONAL (WI)
Morrlilton, Arkansas

Funded:

PVC	\$	671,809
WI		<u>671,809</u>
TOTAL	\$	1,343,618

EVALUATION TEAM
TOM WILSON ASIA/TR/ARD
JOHN NYSTUEN Community Systems Foundation(CSF)
IKE HATCHIMONJI AFR/DR/ARD

EXECUTIVE SUMMARY

Evaluation of AID/PVC Matching Grant To Winrock International

A. Problem and Overview. Small farmers often raise animals as one enterprise in their farming system. An estimated fourteen percent of the value of all agricultural output in developing countries is in animal products despite the fact that most nutrients consumed by the rural poor come from plant sources. Livestock is important to the livelihood of many families; making use of unarable land, converting crop residues and by-products into high quality food, and providing a type of savings (ready cash).

The major problems are management techniques and very low quality livestock. Significant improvement is possible if producers gain access to, and adopt knowledge of, improved management practices. However, effective transfer of knowledge is difficult. One avenue of delivery is through private voluntary organizations (PVOs) and host country (HC) agencies whose personnel are in direct contact with rural households through agriculture, health and education extension services. Another problem has been that these institutions often do not have access to technical know-how. If PVOs/HC Agencies receive expert technical assistance in animal husbandry they are in a better position to introduce improvements in and raise the quality of life.

B. AID Assistance. In response to an unsolicited proposal from Winrock, a Matching Grant was awarded through AID/PVC on a 50/50 cost basis for a period of three years starting August 21, 1981. The total projected cost was \$1,343,618, of which AID contributed \$617,609. The agreement was extended with no additional funding from September 30, 1984 to September 30, 1985 allowing WI one additional year to develop technical, information and training services for US based and indigenous PVOs and HC institutions working in rural communities in developing countries. The matching grant goal was to assist these institutions in their effort to improve livestock production capacity and thereby increase the incomes of rural people. Under the grant, WI was to develop ways to transmit such knowledge through information services, workshops and on-site technical assistance.

C. Purpose and Methodology of Evaluation. The purpose of the evaluation was to decide whether AID should continue to support the Winrock Program. Previous evaluations reviewed the first and second annual reports. The current evaluation covers a three year period and is a full review of activities under the grant. A team of three people reviewed documentation, reports and training materials; visited WI facilities; interviewed HC workshop agencies, instructors, participants, people using the TA, and Winrock staff

responsible for the project. A general questionnaire was sent to AID missions to be forwarded to PVOs, HC agencies and workshop participants.

E. Program Design and Policy Implications. The team found that the program was well designed. The information service is a necessary component of this program which is designed to assist those unable to keep up with scientific developments in animal agriculture. The key to an effective workshop is identifying a local person as a leader in organizing the workshop, finding local instructors, and arranging field demonstrations.

The team found that the program supports AID policy with regard to technology transfer. Training of trainers in technology transfer is slow to produce change. If AID is to commit to such an undertaking, it must stay in for the long haul. The on-site TA is effective in transferring knowledge but the capacity to provide such service is limited. The grant is most appropriate for this effort.

D. Findings. The project has created a workable computerized database with 12,000 references accessible by author, title, country, animal species, and other keyword descriptors. This may represent the largest block of references on goats and sheep in the world. Two thousand twenty-two (2,022) PVOs, HC agencies, AID missions and Peace Corp, receive the BULLETIN and TECHNOTES as part of an information network created under the program. Training aids, books, manuals, slide and video-tape presentations have been published.

Three workshops have been conducted, a total of 127 participants (including HC instructors). The two week workshops included practical experiences and demonstrations with live animals. Workshops have been conducted in Honduras, Indonesia and the Philippines. Agencies in nine other countries have used WI services; Dominican Republic, Haiti, Peru, Colombia, Costa Rica, India, Nigeria, Zaire, and the United States.

Technical assistance was provided in response to twenty-one requests. Often Winrock technicians accommodated this assistance in conjunction with travel to other Winrock activities.

F. Recommendations. We recommend the following ranking of activities in continued support by AID/PVC: (1) Workshops, (2) Information Service, (3) Technical Service, (4) Publication of The BULLETIN and TECHNOTES.

We recommend Winrock prepare a proposal for a follow-on multi-year matching grant and FVA/PVC consider interim funding to provide continuity of current and proposed grant periods.

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EVALUATION METHODOLOGY

The AID/W project documentation was reviewed by the Team and the methodology decided.

A questionnaire was developed to solicit information of WI services. Those to be contacted included participants of the workshops. A cable was sent to AID missions inquiring of their knowledge and/or use of Winrock services and/or in-country use by PVOs. It was decided, due to time constraints and other limiting factors, one consultant would visit Indonesia and the Philippines. The consultant used the questionnaire as the basis for interviewing HC and other knowledgeable people concerning in-country services performed by WI. Some telephone contacts were also made with PVOs in the US using the questionnaire as the basis for acquiring information.

The team visited WI to review the program with program personnel and evaluate institutional backstopping and support.

THE GRANT

The Grant was awarded in response to an unsolicited proposal from WI on a 50/50 matching fund basis for a three year period and later extended for one year.

Under the Grant, Winrock, is to provide TA to PVO's that are involved in direct assistance to low income, rural people in developing countries. The goals are to increase food production and to improve well being of this group through more effective animal husbandry. The approach is to enhance the capabilities of PVOs and other institutions in their assistance efforts. Principal activities to be undertaken by Winrock are (1) to develop and operate an information service, (2) to develop training and materials, and (3) to provide technical assistance services.

WINROCK INTERNATIONAL LIVESTOCK RESEARCH & TRAINING INSTITUTE

BACKGROUND AND DESCRIPTION

WINROCK INTERNATIONAL(WI):

WI is an independent, nonprofit corporation chartered in 1975. It was registered with AID in 1978 as a Private Voluntary Organization (PVO). The Institute's headquarters are on Petit Jean Mountain, the original site of WINROCK FARMS, near Morrilton, Arkansas. The mission of WI is to advance animal agriculture for the benefit of people, especially low income farmers. Animal agriculture refers to livestock production as one enterprise of the farming system.

The Winthrop Rockefeller Charitable Trust has provided support but WI currently receives more than sixty percent of its operating

budget in the form of contracts, grants and donations. The 1983 annual report (latest available) reported assets of \$20.8 million and an operating budget of \$5.5 million. Annual funding in 1984 was reportedly \$7.2 million.

The professional staff consists of animal scientists, and communication and training specialists. Winrock employs forty-four professionals including approximately twenty who are stationed abroad. The staff are employed in long term posts and on short term life-of-project positions. Winrock can also quickly select and arrange service of consultants from a pool of over seventy individuals. Annex 1 is a list of current professional staff.

The programs of Winrock are meant to advance animal agriculture through (1) developing improved production practices and systems, (2) training specialists in development and dissemination of technology, and (3) participating directly in development and implementation of field projects.

Range and pasture management, crop/livestock systems, forest agriculture, environmentally sound agricultural management, food processing/marketing, and agricultural policy are all topics under attention in addition to more direct subjects such as animal breeding, health, nutrition and management.

WI participates in programs which are mostly located in the tropics of Latin America/Caribbean, Africa and Asia. Family farmers with livestock are the primary recipients. Ruminants, especially goats and sheep are species that have received special attention. Activities aim to provide technical services and training to development groups of all types.

PROJECT PERSONNEL:

Four people have had primary responsibility for the program: Andres Martinez, Will Getz, Richard Sellers and Barbara Scott. Table 1 is a summary of persons and person-months charged to the project. Annex 4 consists of the vitae of the principal staff.

The project planned 15 person-years (PY) for implementation. The Grant to provide 9PY and WI to provide 6PY. A total of 9.3PY were assigned during the first two years and 7.1PY in year three making a total of 16.4PY. The allocation of an additional 1.4PY resulted from the three-month start-up phase.

TABLE 1. PERSONNEL ASSIGNED TO THE PROJECT

Name	1982	Person-Months			Responsibility
		1983	1984	Total	
Andres Martinez	10.2	7.2	6.7	24.1	Program Leader; & TA Associate Leader; Develop Training & Materials Information Services; Develop Database & Answer Inquiries
Will Getz	2.7	9.9	8.5	21.1	
Richard Sellers	12.0	12.0	10.5	34.5	

Barbara Scott	12.0	12.0	12.0	36.0	Program Support;Reference Input, & Secretary
Venetta Vaughn	.4	1.7	.8	2.9	Publication Layout and Graphics
Randy Smith	.7	1.6	.2	2.5	Graphic Design & Sketches
Mason Miller	----	1.7	.6	2.3	Editing & Communications
Marsha Drew	.9	1.3	----	2.2	Training Development
Jim Yasman	----	.3	1.5	1.8	TA-Animal Science
Melissa Beck	.6	.5	.1	1.2	Audiovisual Support for
Kathy Jones	----	----	1.0	1.0	Training Materials
Hank Fitzhugh	----	----	.7	.7	TA-Production/Breeding
Sara Guthrie	----	----	.7	.7	TA-Sociology/Marketing
Ted Williams	.3	.3	----	.6	Program Development
Essie Raun	----	----	.3	.3	Editing
Dick Newton	----	.1	.2	.3	TA-Livestock Facilities
Edwin Geers	----	.1	.1	.2	Production Program
John De Boer	----	.2	----	.2	Econ. Assessment
Word Processing	1.6	5.1	3.7	10.4	Manuscript Preparation
Computer Support	.5	1.8	1.4	3.7	Database, Mailing List
Translation Services	.5	2.0	1.0	3.5	Translation
Subtotal	42.4	57.8	50.0	150.2	

Short-term Personnel

T. Tedford	12.0	----	.5	12.5	Animal Health
A. Tillman	----	4.0	1.0	5.0	Training Material
M. Wilson	----	2.0	4.0	6.0	Feeding Stuffs Develop
E. Trabing	----	2.0	3.0	5.0	Database Reference
M. Latorre	----	----	1.5	1.5	Classification & Input
B.J. Price	----	1.5	----	1.5	Tech. Translation
G. Marsh	----	1.5	----	1.5	Tech. Translation
R. Rice	----	1.5	1.0	1.5	Workshop Materials
M. Cox	----	1.5	1.0	2.5	Workshop Materials
H. Ridenour	----	----	3.0	2.5	Livestock Plan Project
Subtotal	12.0	14.0	15.0	3.0	Range & Livestock Mgt.
Grand Total	44.4	71.8	65.0	41.0	Develop Ed. Materials

Richard Sellers, manager of the Information Service, resigned Nov. 1984 and has been consulting part-time until his replacement is found. Annex 5 is the current job description for this position.

INFORMATION SERVICE:

The two primary objectives of this activity are: (1) to identify, gather and computerize an animal husbandry database and (2) to publicize its availability along with other WI services.

Clientele Needs Assessment: This included identification of PVOs involved with animal projects (directly, indirectly or through provision of services) and the familiarization with their program and needs. Visits included key US based PVOs:

A.T. International
Care, Inc.
Catholic Relief Service
Christian Veterinary Mission
CODEL (Cooperation in Development)
Food for the Hungry International
Heifer Project International
New TransCentury Foundation
Save the Children
VITA (Volunteers in Technical Assistance)

Other nonprofit organizations such as Peace Corps, Organization of American States, TAICH (Technical Assistance Clearing House) and several church groups were also contacted. Several indigenous PVOs and government institutions throughout LA and the Caribbean were contacted. Conclusions:

- A. A dire need exists for WI services, especially for information and training.
- B. US based PVOs are willing to explore co-financing for training materials.
- C. Sharing some costs of services is a problem with indigenous PVOs, but not with those based in the US or most HC institution.

Computer Database: The database is stored in a CEC PDP 11/70 computer which has three 40 megabyte disks and a high-speed printer. Data includes information on production, institutions and experts. Data is entered by species (cattle, water buffalo, goats, sheep, swine, poultry, rabbits, and bees) for each developing country.

Inputs:

- A. Over 12000 references identified, reviewed, catalogued; 2630 copies are in project files.
- B. Over 200 Spanish references translated to English.
- C. Over 4800 references on cattle, sheep and goats.
- D. Over 1300 scientific and technical articles ordered through scientific exchange.
- E. Information exchanges with: International Livestock Center for Africa (ILCA); USDA/OICD Technical Inquires Office; Peace Crops Information Collection and Exchange Office; Volunteers in Technical Assistance (VITA); and Heifer Project International.
- F. Contacts with 214 publishers for permission to reprint articles for use in developing countries. 76% gave permission to copy abstracts and/or entire text.

Copyright restrictions prevent photocopying most references. Permission is continually requested to photocopy materials or make arrangements for payment of royalties. The ability to provide these references is an important service since the majority of the clientele do not have ready access.

Outputs:

A. Country profiles including:

1. Production:

Animal population (sex and age where available); and annual production of meat, milk, eggs, honey, or hides.

2. Resources for research and development:

Organizations/institutions working in HCs; and experts, in-country or region, available for consultancies.

3. Pertinent Bibliography:

Including author, title, and publisher and cross referenced with other countries, and regions by subject matter, breed, environment/climate, and other.

Continued emphasis has been placed on the goat and sheep data because of their importance to small producers. Searches yielding little or no information are reviewed by staff members and/or searched through the WI library, which subscribes to over 400 specialty journals and serials.

The BULLETIN: This (table 2) is the project newsletter and is published three to four times annually. It is the communication link between WI and some 2,000 individuals, nonprofit institutions and/or PVOs around the world. Regular features include:

- editorial comments based on WI views and experiences;
- news, notes, announcements, publications and services;
- examples of informational and technical services performed;
- procedures to obtain support services;
- briefs on applicable research from around the world;
- feedback from readers and leaders in the broad community;
- and one or more TECHNOTES.

Table 2 - BULLETIN

PRINCIPAL TOPICS

	PRINCIPAL TOPICS
1. September 1982	Announcing The Project Brochure
2. April 1983	Announcing Project Components and Purpose
3. July 1983	Examples of Available Information, Training, TA, Haiti Goat Project
4. September 1983	Information Survey Results, Training Programs, Research, International Center for Aquaculture
5. January 1984	LA Workshop, ASIA Workshop, Goat Health Handbook, Embryo Transfer in Cattle, IARCS
6. March 1984	Dairy Cattle Breed Succeeds, Chemical Castration, ASIA Workshop, Goat Health Handbook, Goat Training Manual
7. June 1984	PVO Success Story - Cochokisera, Training Materials, The Concept of International Centers

TECHNOTES: These are a series of technical information sheets featuring brief but complete discussions and guidelines on an array of technical issues. Priorities have been established for both species and subject matter content. TECHNOTES are designed to be kept as ready reference in a looseleaf notebook. One or several TECHNOTES are mailed regularly with The BULLETIN.

Table 3 TECHNOTES

1.	Mammalian Coccidiosis	English & Spanish
2.	Internal Parasites in Sheep and Goats	English & Spanish
3.	Poultry and Salmonella	English & Spanish
4.	Alternative Feeds for Pigs in the Tropics	English & Spanish
5.	Protein Sources for Swine in the Tropics	English
6.	Colostrum for the Newborn	English
7.	Vaccination and the Needle	English
8.	Diarrhea in Young Livestock	English & Spanish
9.	Stocking Rates in the Tropics	English & Spanish
10.	Facilities for Rearing Young Stock	English & Spanish
11.	Feeding the Lactating Female	English & Spanish
12.	Selection and Management of Replacements	English & Spanish
13.	Methods of Animal Identification	English & Spanish
14.	Establishing an Artificial Insemination Service	English

Mailing List: To ascertain that information reaches the user, considerable effort has been made to develop an effective mailing policy by considering:

- Appropriate organizations
- Appropriate areas of the world
- Mailing costs

Examples of mailings include:

Domestic:

- AID/Washington
- US Based PVOs having Ag programs
- USAID Missions
- Private Foundations

International:

- US/PVO Foreign Offices
- Indigenous PVOs
- Peace Corp Offices
- USAID Mission Directors
- International Agriculture Research Centers (IARCs)
- Ministries of Agriculture

Table 4 -
PUBLICATION

	NO. OF MAILINGS	
	Domestic	International
The Brochure	598	396
Bulletin No. 1	677	455
Bulletin No. 2	655	622
Bulletin No. 3	675	868
Bulletin No. 4	683	1,139
Bulletin No. 5	621	1,228
Bulletin No. 6	663	1,356
Bulletin No. 7	716	1,351
TechNotes No. 1 to 14 sent with the Bulletin		

TRAINING:

Survey of Training Materials: Winrock conducted a survey to determine the availability of training materials. A total of 430 non-profit organizations in the US and around the world were contacted. Results indicate a very low and sporadic production of related materials.

Training Materials Preparation: Project implementation identified three broad target areas as principal constraints to animal production in developing countries. These are: disease, poor nutrition and mismanagement. Training materials have been prepared in each of these areas.

Table 5 TRAINING MATERIAL

HANDBOOKS

- Goat Health Handbook(English and Indonesian)
- Sheep Health Handbook
- Feeding and Nutrition of Ruminants in the Tropics(draft)
- Planning Small Environmentally Sound Livestock Projects(draft)

COURSE MANUALS

- Sheep and Goat Rearing in the Tropics(Spanish)
- Manual for an Intensive Two-Week Course on Meat and Milk
- Production from Sheep and Goats in the Tropics(Spanish, English & Indonesian)
- Trainers Guide and Training Methods in Livestock
- Production(draft)

SLIDE PRESENTATIONS

- Internal Parasites of Domestic Ruminants(English, Spanish)
- Identification Treatment and Prevention of Internal Parasites
- in Small Domestic Ruminants(English, Spanish)
- Ram Epididymitis(English)

- Bluetongue(English,Spanish)
 - Hoof Trimming in Sheep and Goats
 - Vegetative Propagation of Grasses
 - Making Silage with a Tropical Grass
 - Milking Goats
- VIDEOTAPES
- Health/Management Practices for Goats(Spanish)

Workshops: At least three regional workshops were to be conducted, one in each of the principal regions of ASIA, LA, and AFR. The following activities were done in preparation:

1. Developed curriculum
2. Developed instructional outlines for 50 topics. Each topic designed for 45 minute presentation.
3. In addition to Training Handbooks other resource references were found.
4. Prepared appropriate background notes for each topic to give participants ready reference to key points of instruction.
5. Designed pre-post tests for participants to evaluate own progress and provide WI/AID with assessment of effectiveness.
5. Developed guidelines for hands-on experience using daily practicals.
6. Developed a basic training and workshop configuration

TECHNICAL ASSISTANCE:

Services: The purpose is to provide clientele with technical expertise through correspondence, telephone, on-site visits or meetings. Technical services include:

feasibility studies; project design, development, management, evaluation, agricultural economics and farming systems research and other consultancies

Requests are divided into two categories - consultancies and on-site technical assistance. Consultancies include requests answered through correspondence, telephone or meetings. On-site technical assistance refers to those requiring expert's presence on the project site.

Although services have not been widely announced a continuous flow of requests are received. Examples:

A. 18 consultancies provided through correspondence.

B. Six requests for on-site technical services:

Dominica - two for sheep and goat projects.

Kenya - two for sheep and goat projects.

Panama - Feasibility for goat production cooperative.

Dominican Republic - TA for goat production.

Requests for consultancies are expected to continue in an upward trend. The current level of requests (10 to 12 per month) are anticipated to increase to 20 per month.

FINANCIAL STATEMENTS:

AID BUDGET - ACTUAL & COMMITTED - BALANCE FEBRUARY 28, 1985

<u>Item</u>	<u>Balance 12/31/84</u>	<u>Expenses Jan & Feb 1985</u>	<u>Committed</u>	<u>Balance 2/28/85</u>
Program Staff	103296	6441	43225	53630
Technical Support Staff	-14028	3762	750	-18540
Fringe Benefits	-12204	2653	4355	-19212
Travel and Per Diem	81309	1204	39927	40178
Materials and Supplies	53914	701	37000	16213
Consultants	1297	195	2500	-1398
Communications, Postage	3658	662	7200	-4164
Regional Workshops	48165	--	45000	3165
Evaluations	20000	--	--	20000
Unallocated	10609	--	--	10609
TOTALS	<u>296016</u>	<u>15578</u>	<u>179957</u>	<u>100481</u>

BUDGET ADJUSTED AS OF MARCH 1, 1985

<u>Item</u>	<u>Balance</u>
Program Staff	55878
Travel & Per Diem	10178
Materials & Supplies	16213
Consultants	1254
Communications, Postage	3793
Regional Workshops	3165
Evaluations	10000
Unallocated	--
Total	<u>100481</u>

WINROCK BUDGET - ACTUAL & COMMITTED - BALANCE FEBRUARY 28, 1985

Item	Balance 12/31/84	Expenses		Balance 2/28/85
		Jan & Feb 1985	Committed	
Program Staff	101600	3000	9775	88825
Technical Support	-68641	2198	3000	-73839
Fringe Benefits	-41865	780	--	-42645
Communication Facil.	74940	--	2000	72940
Computer	-13848	--	71400	85248
Travel and Per Diem	5625	--	--	5625
Overhead & Admin.	59503	2251	26069	30913
Other	-1276	--	--	-1276
TOTALS	116038	23352	112244	-4705

BUDGET ADJUSTED AS OF MARCH 1, 1985

Item	Balance
Program Staff	-27659
Computer	-12308
Travel & Per Diem	5625
Overhead/Admin.	30913
Other	-1276
Total	-4705

PLANS FOR REMAINING SIX MONTHS:

- Continuing preparation and completion of training materials.
- Continue improving use efficiency of the database.
- Prepare three or four BULLETINS.
- Provide direct technical assistance as required.
- Conduct two workshops in Africa.
- Finalize plans to continue an operational TA program.
- Conduct a final project evaluation.
- Submit final report.

INTERNAL EVALUATIONS AND REPORTS:

Evaluations: An internal evaluation was made of each workshop. The present mid-project evaluation was to be scheduled earlier and to include a PVO, AID and WI.

Reports: Three annual reports have been completed by WI.

EVALUATION

SHOULD A.I.D. CONTINUE TO SUPPORT THE WINROCK PROGRAM?

No agency, least of all AID, wants to accept an obligation to fund an activity in perpetuity. Therefore any consideration of continuing support for Winrock's services to other voluntary agencies rests on the contribution to be made toward achieving the mission of AID/PVC. The four activities of Winrock under the current grant are assessed with this purpose in mind.

DISCUSSION:

Information Services: At the heart of the information services are the BULLETIN and the COMPUTER DATABASE.

The BULLETIN is the only systematic vehicle for advertising program services. The workshops and occasional publications are advertised in the BULLETIN but the technical services and databank services are not described in each issue. No BULLETIN was issued between September 1984 and March 1985. Three additional BULLETINS and ten additional TECHNOTES are scheduled to be published before the end of the project.

The DEC PDP 11/70 Computer is not heavily used by other staff and is more than adequate to handle the information system. Contributions to and utilization of the databank by professional staff other than the information manager appears to be minimal.

The need for an expert information clearing house exists. U.S. PVO's with overseas field operations and indigenous PVO's and other agencies do not have the capacity in any systematic way to learn of or make practical use of the knowledge stream being continuously created in the animal sciences. Under the grant, Winrock has built a system that acts as such a liaison. AID/PVC objectives are well served by this activity. We know of no organization or mechanisms that can match Winrock's performance. However, the system will remain costly to operate and it is not growing very fast.

If funding is removed, Winrock will likely continue to operate the information system at some level as a support for their other activities. However the probability of dropping it entirely increases given competition for funds for other activities. As with AID, Winrock management views matching grant money as most cost effective. They will be tempted to divert funds from activities they must fully support to activities where their dollars are matched by outside funds. This no doubt will be true of the new Winrock as evidenced by the challenge offered to it by the Winthrop Rockefeller Charity Fund.

An information system that creates linkages reaching to remote rural places in developing countries cannot be built quickly. First, knowledge of the service must be disseminated and secondly,

a reputation for reliable, timely and useful response must be justified through successful experiences of field workers who use the service. They will then use the services again and will tell their colleagues about it. The more this is done early on, the faster the growth. Winrock has created a system with workable data acquisition protocols, machine management, and a sizeable, easily accessed databank in place. Now they must vigorously press output to build the networking reputation.

Continuing support from AID/PVC will influence Winrock to give high priority to this task. In our opinion, AID/PVC's interests are well served by such actions especially in influencing the pace at which the information network grows.

Table 6 is a monthly record of information requests. Each request is logged in and action taken and time spent on the response is recorded. The record keeping is very good. An example of an exchange of letters is reproduced in Annex 7. This exchange started with a note appended to a response to a questionnaire enclosed with the second issue of the BULLETIN. Mr. Wayne Snell of the Summer Institute of Linguistics in Lima, Peru made an inquiry about English milk sheep. The request was received in September 1983 and answered in three days by Richard Sellers. Mr. Richard Rutter also of the same Institute but in Pucallapa, Peru learned of Winrock's response and also wrote for additional information. Through February 1984 a total of seven letters were exchanged.

Table 6 INFORMATION REQUESTS BY MONTH

	1982	1983	1984	1985
January	0	9	18	26
February	1	19	18	8
March	1	13	13	0
April	1	6	17	0
May	4	6	14	0
June	0	7	12	0
July	7	11	18	0
August	2	7	17	0
September	3	18	17	0
October	3	17	12	0
November	4	16	12	0
December	<u>8</u>	<u>16</u>	<u>16</u>	<u>0</u>
Total	34	144	184	34

Also included in Annex 7, an exchange of letters between Mr. Sellers and Mr. Sinclair of the Zambia College of Agriculture. Mr. Sinclair had noted in BULLETIN #5 an article about chemical castration. In a letter dated 7 November 1984 Mr. Sinclair announced the information supplied led to the setting up a trial of the effectiveness of the method in Zambia.

During this Evaluation a personal contact with Mr. Kevin Rushing, USAID/Jakarta provided a positive response. Mr. Rushing provided liaison for the workshop held in Indonesia. However, prior to that time he had received several Winrock documents from the requests he had sent to the Technical Inquiries Office USDA/OICD. The materials he received were excellent. He was aware of The BULLETIN but did not see it in the Jakarta offices (although all mission offices are on the Winrock mailing list).

In our opinion the computer supported information service is a necessary component in Winrock's program to backstop PVOs with expert knowledge and assistance. The central idea behind the grant is that Winrock has the capability of keeping abreast of scientific knowledge in this field and should act as a bridge to PVO's that cannot do so. Winrock must continue to commit resources to the information service to be able to act as this bridge.

As it stands, the information system is a valuable resource, but to maintain it takes considerable continuing financial support. One observes from Table 6 that the number of users per month has not increased since September 1983 (until early this year), and averages around 16 per month. The user rate should be increased in order to justify the expense of keeping current with the literature.

Eight thousand six hundred of the references are backed up by hard copies of the articles or document involved. Many of these references may be photocopied and sent to the requesting agency, copyrights permitting. Sometimes only an abstract may be used without paying royalties. Winrock has contacted many publishers of journals throughout the world to obtain permission to copy material. Minimum costs for reproduction and postage are charged. In letter exchanges clients are asked something of their background, a price limit they can afford and method for returning mail. No charge is made for the use of the databank. Knowing the client's background helps in making choices about what to include with the reference.

The databank is kept up to date by systematic search. References also come through use of systems such as the Institute of Scientific Information (ISI). Post cards are sent requesting reprints. After receiving the reprint the document is abstracted and the data entry completed. If the article is in one of the journals for which the Winrock library has a subscription reprints are not procured.

There are several ways to reduce this cost: (1) be more selective in the type of data entered; (2) increase posting and searching speed - the software REF-11 mentioned in Annex 8 will contribute to this end; and (3) employ a small machine dedicated to the information systems. After experience gained in the past three years, Winrock management is in a position to re-think how best to provide an effective information system.

Training: Under the grant, Winrock produced several types of training materials. The Goat Health and the Sheep Health Handbooks have been well received. They are likely to be very durable products. Annex 9 is a selection of reviews of the Goat Health Handbook. The Sheep Health Handbook has not been out long enough for reviews to appear in print.

Also produced are workshop manuals, miscellaneous annual reports, brochures, posters, and announcements for use by Winrock as well as producing similar materials, as a service for other PVOs. Slide sets and video tape cassettes are produced for use in training. A professional staff of editors, layout and visual arts technicians for all media are available at WI to support other units. Production of training materials supports other activities. To the extent other activities are funded some proportion of funds must be allocated to production of such products.

Winrock has given editorial and word-processing support to help in publishing items of use for their mission. For example they are providing such support to publish a manuscript entitled Raising Sheep and Goats in the Tropics by Miguel Velez in cooperation with the Escuela Agricola PanAmericana. Winrock is to produce a camera ready copy for publication.

A policy of regionalization of training aids has been adopted. This means not only producing material in the appropriate language for a region but also making certain it reflects the environmental and social conditions of the tropics so that viewers can relate the messages directly to their own situations. This usually means obtaining site specific sets of visual aids.

Winrock has staff capabilities in editing and translating materials into and from Spanish. Translations to French needs to precede expanding activities and programs in Africa. At least fifteen Francophone countries in West Africa could benefit from WI services.

All training materials and aids are subject to a procedure of an outside review which may delay distribution but increases confidence in materials being produced.

Winrock does a thoroughly professional job with training materials. The material looks professional and is authoritative. This is important for the international clearing house and training roles Winrock is developing.

If Winrock no longer had AID/PVC funding it might continue to publish the BULLETIN on its own since it is a good vehicle for publicizing Winrock activities. Continued publication of the TECHNOTES is less certain.

Three workshops have been conducted on milk and meat production from goats and sheep in the tropics. The place, number of applicants, number of participants, instructors, and dates are listed in Table 9. Each workshop lasted two weeks and included lectures, practicums and evening sessions. Local PVOs or host government research and training centers acted as local hosts.

Table 7 WORKSHOPS

Place	No. of Applicants	No. of Participants	No. of instructors	Dates
Honduras	105	30	12	20 Nov-4 Dec 1983
Indonesia	89	30	20	8 Jul-22 Jul 1984
Philippines	45	24	11	22 Jul-4 Aug 1984
Total	239	84	43	

Table 8 lists topics covered in the lectures, practicums or both. Lectures were forty-five minutes to one hour long. Each instructor dealt only with his or her specialization.

The practicums involved hands-on experience for each participant. Practices such as milking, preparing feed, hoof trimming, dehorning and castration were practiced or demonstrated. In addition animals were slaughtered to demonstrate proper preparation of meat. Autopsies were performed on a few animals to diagnose health and disease condition. Twenty to twenty-five animals were purchased for each workshop.

The workshops were intense experiences and many participants complained that too much material was covered in the time allotted. Many considered the evening session a burden. The practicums were well received and considered essential.

Table 8 Workshop Curriculum

A. Feeds and Feeding

1. Development of Nutrition Concepts
2. Composition of Plants and Animals
3. Analysis of Feeds
4. Nutrients: Air, Water and Minerals
5. Minerals
6. Organic Nutrients
7. Digestion, Absorption and Metabolism of Nutrients
8. Feed Standards: I Classification and Composition of Feed

9. Feed Standards: II Classification and Composition of Feed
10. Feed Standards: III Nutritional Requirements
11. Feed Standards: IV Nutritional Requirements
12. Techniques for Balancing Rations
- B. Animal Sanitation
 13. Principal Diseases: Introduction and Classification
 14. Characteristics of Principal Diseases
 15. Control of Disease: Concepts and Vaccination
 16. Control of Disease: I Methods and Concepts
 17. Control of Disease: II Methods and Concepts
 18. Control of Disease: Techniques and Precautions
- C. Technology Transfer
 19. Technology Transfer
 20. Project Development
- D. Animal Production
 21. Reproduction: Anatomy and Endocrinology
 22. Reproductive Efficiency
 23. Mendelian and Population Genetics
 24. Selection and Methods of Crossbreeding
- E. Production of Milk and Meat
 25. Maintaining Milk, Feeding and Conservation
 26. Manufacture of Milk Products
 27. Meat Products: Health and Hygiene
 28. Inspection and Use of Meat
- F. Management of Pasture and Forage
 29. Establishment of Pasture
 30. Important Species of Grass and Legumes
 31. Handling of Recently Established Pastures
 32. Pasture Utilization I
 33. Pasture Utilization II
 34. Stock Capacity
 35. Natural Pasture - Use and Management
 36. Source of Seeds and Other Inputs
- G. Buildings and Facilities
 37. Methods and Design of Enclosures
 38. Methods and Design of Barns (buildings)
 39. Planning of Water Tanks and Pasture Space
 40. Equipment and Materials
- H. Handling Practices
 41. Care of Newborn
 42. Management From Birth Through Weaning I
 43. Management From Birth Through Weaning II
 44. Management of Animal Reproduction
 45. From Weaning to Sale
 46. Plan of Production and Management
- I. Economics
 47. Basic Concepts
 48. Production Systems: Inputs and Outcomes
 49. Budgets
 50. Market Economics: Cost, Prices and Market Growth

Trade-offs are involved in considering the amount of material covered. Sessions longer than two weeks do not appear feasible. Five different evaluation forms, which together covered all aspects of the workshops, were distributed to participants to elicit responses to the material presented. In addition they were given an examination at the end of the workshop on the factual material covered. In Honduras a pre-test was also administered. Each group scored around 75% correct answers on the final test but the Honduras group pre-test score was over 70%. The gain in performance was 4.4 percentage points in Honduras. The prior knowledge level was not surprising since preference was given to admitting people engaged in some sort of small ruminant project. Almost all participants said they gained from the experience and that the instructors were well qualified.

Each participant received a large loose-leaf notebook containing lesson plans(400 pages) to be used as a study guide and reference. In addition each received several reference works. The materials were meant to be taken home for future reference. Other teaching aids used in the workshops included slides, video tapes, and live animals.

The course manual was the main document for presenting and using course material. It was developed by Winrock personnel. The language is too formal. The same amount and depths of material could be more simply put by editing the present document. This would also help the local instructors in their translations and interpretations of the content.

The workshops were judged to be generally successful due to good planning and advance work by Winrock. Effective host agencies with good facilities were found. A lead person on location was identified in each case. This person was Dr. Miguel Velez of the Escuela Agrícola PanAmericana in Honduras. In Indonesia Dr. Hendrik Knipcheer was contacted. He is a member of the Winrock staff posted at CRIAS, Center of Research In Animal Science, participating in the AID/S&T Small Ruminants CRSP. Mr. Richard V. Fagan, Philippine Rural Life Center was the central figure in organizing local arrangements there. These people were familiar with local facilities and could arrange for administrative review of applications, logistics, and most importantly, identify competent local instructors.

Employing local instructors is essential not only because of language requirements but also to interpret the general guidelines presented in the manual. Some dissatisfaction was expressed over the Indonesian instructors because some of them failed to translate the specific to the general. Part of the problem was that they were mostly research scientists without experience in extension teaching or very specific knowledge about local field conditions. This did not appear to be a problem in the other two workshops. The local instructors were provided with travel and per diem plus a small

stipend in the cases of the Philippines and Indonesia. The instructors received no stipend in Honduras as the workshop instruction was considered an appropriate part of their responsibility as faculty members of Escuela Agricola PanAmericana.

The local agencies hosting the workshops did not contribute financially except perhaps by charging partially subsidized rates for classroom and field facilities and board and room for participants and staff. They each expressed interest in hosting similar workshops again but expect the necessary funding to come from elsewhere.

The participants financed their own transportation to the workshop. This did not seem to be a burden although some people who were accepted were unable to attend because they could not obtain travel funds. Naturally this affects people from other than the host country. There is some value, in terms of commitment, having the participant's organization pay at least some costs.

Winrock has gained valuable cross-cultural experience from these workshops. They are in a good position to continue them on a regular basis. Judging from the number of applicants and expressed desire to participate, sufficient demand exists to justify the effort.

Winrock is not likely to fund an overseas workshop program on its own. It would seek funds elsewhere if AID money were not available. They are good at putting on workshops. Their experience allows them to estimate costs quite closely.

It is possible that Winrock could continue offering workshops indefinitely as part of their commitment to train trainers if participants were able to pay an attendance fee and Winrock paid the salaries of participating staff. However, at this time, it is doubtful PVOs would be willing to fund the activities. More time is needed by the PVOs to verify the value of their staff attending a workshop. Early indicators are that workshops are very useful but the ultimate payoff must be in achievement of participants which their organizations attribute to the Winrock experience. The workshops represent a resource central to the interests of AID/PVC and they should be utilized. A longer period of outside funding is necessary to allow the reputation to build.

Technical Assistance(TA): In its general program Winrock provides technical services only on a cost reimbursement basis, either through grants or direct payment. Its participation in the Small Ruminant Collaborative Research Support Program (CRSP) is an example. Winrock will continue to seek such grants and contracts.

Technical services are expensive but very effective. There are examples of TA under the grant both through correspondence and on-site visits. This seems to be exactly the type of support the field operating PVOs require. However, the number of exchanges has been small. Follow-up aid to workshop participants would seem a worthwhile way to increase this activity.

Technical services complement the information system in several ways. The information service is much more effective if replies to inquiries reflect judgement based on knowledge of animal husbandry. This requires participation of the professional staff and should be part of their job descriptions. The professional staff is also useful in identifying possible resource personnel. They influence the content of the databank by making recommendations for inclusions in it concerning the topics they are working on. The recognized specialization of the information system on small ruminants is a consequence of this process.

In the period February, 1982 to February 1985, the manager of the information system responded to 396 requests for technical assistance. In this same period, other professional staff responded to 21 requests (Table 9). Often consultancies are in conjunction with travel to other Winrock project sites. It was anticipated that recipients of on-site TA would bear some of the costs. So far, no evidence is shown to reflect any cost-sharing taking place.

Table 9 PERCENT OF 21 TA RESPONSES PERFORMED IN LDC & US

<u>100% or 19PM</u>		<u>LDCs</u>		<u>US</u>	
		No. PM	No. Projs.	No. PM	No. Projs.
LDC 38%	or	7.2	on 3		
US 47%	or			8.9	on 4
15% or 2.9PM			on 5		on 9

Under the grant 23 countries were pre-selected as sites for potential work. (Table 10 - Technical Assistance) was performed in only six of these countries while requests were filled in five countries not selected. Following established guidelines the inquiries seeking financial assistance are rejected. Another guideline deals with cost of consultancy and is not to exceed 10% of total project costs. The minimum cost of a consultancy is ten to twelve thousand dollars; thus projects need to be larger than \$100K to \$120K to meet the guidelines for an on-site visit if that is to be the sole purpose of the visit.

Table 10 TECHNICAL ASSISTANCE PERFORMED (Countries)

<u>Pre-Selected</u>	<u>Worked In</u>		<u>Other</u>
1 Dominican Republic	X		
2 Haiti	X	X	Columbia
3 Honduras	X	X	Costa Rica
4 Peru	X		
5 Bolivia	X		
6 Guyana			
7 Jamaica			

8	Gambia			
9	Malawi		X	Nigeria
10	Mali		X	Zaire
11	Cameroon			
12	Kenya			
13	Lesotho			
14	Liberia			
15	Tanzania			
16	Uganda			
17	Botswana			
18	Bangladesh			
19	Philippines			
20	Indonesia	X		
21	Thailand	X		
22	South Pacific		X	India
23	Egypt			

The evidence is that on-site consultancies are very effective, both when PVO personnel visit Winrock and nearby farm enterprises that cooperate with Winrock and also where Winrock personnel make on-site visits in HCs. The factor limiting success is the level of activity has been very modest.

An example of TA given is the International Nursing Services Association (INSA) Haiti Goat Project. INSA is a PVO with headquarters in Atlanta, Georgia. They are engaged in training community health workers in an inaccessible region near Port-au-Prince. They cooperate with a local PVO called ROOTS (Rural Outreach Opportunity to Serve). As part of their aid INSA is seeking ways to improve the nutritional status of women and children. In September 1983 some INSA staff members visited the Winrock Goat Multiplication Project in Hinche, Haiti to see if a goat project would fit their needs. Since that meeting INSA and Winrock have had a series of useful exchanges in which Winrock has provided technical assistance ranging from developing the idea to a promise of free delivery of hybrid goats to get production underway. INSA personnel knew nothing of raising goats. Winrock's technical assistance has been essential and timely for that process and has led to an INSA goat project. See letter from Patricia Harrell to Paul Bisek, AID/PVC--Annex 10.

Patricia Harrell and Ellen Hayes Cook spent several days at Winrock in January 1984 consulting on goat breeding, management and project operations. They also received assistance in writing a project proposal and developing promotional material to help raise money for the project. They were the first PVO people to be invited to Winrock under the technical service grant. They paid their own transportation and expenses. Some Winrock staff time was charged to the project, some time was absorbed by Winrock.

Several Winrock personnel have visited the INSA health center in Darbonne, Haiti. They provided advice on where and how to build goat facilities including drawing up plans, assessing the feed situation and identifying sugar cane leaves and bagasse (by-product

of sugar cane processing) as a feed source, and suggested management and program strategies for the project. Winrock did not charge INSA for the on-site visits because their presence in Haiti was incidental to their project in Hinche.

Several INSA personnel have visited the Winrock facility at Hinche and received training in operations, goat care and management, and instructions on how to build goat facilities. Winrock provides board and room for visitors at Hinche.

Finally Winrock will provide the initial goats to INSA to start the project after completion of the first phases of training and facility preparation. This is now scheduled for May 1985.

INSA submitted a proposal to AID/Haiti but was turned down. AID said the proposal had merit but that they wanted to see how the Winrock Hinche Center worked out before starting another. Subsequently INSA proceeded on their own after raising funds in Atlanta through staging a hunger walk and with aid from the local Girl Scouts. In this effort they used promotional material that Winrock helped prepare.

In the INSA goat improvement scheme the Goat Multiplication Center will offer stud service from hybrid bucks and later with pure bred Nubian goats. They will train and advise producers on goat management and trade a hybrid pregnant female for a fertile indigenous buck. The buck will then be slaughtered. The aim is to improve the quality of goats in the region through selection. It will still be a year or two before noticeable genetic changes in meat and milk occur. Winrock's continuing advice will improve the chances for the project to succeed.

Patricia Harrell and Ellen Hayes Cook are pleased with the technical assistance provided by Winrock. The project probably would not have been possible without that help. Now they feel confident INSA will be able to run their center and contribute to food resources in their region.

The association between Winrock and INSA is an example of the technical assistance process at work. INSA, a PVO whose expertise did not include animal husbandry. Winrock was able to provide this expertise through on-site visits and visits by INSA personnel to Winrock. Most of the disciplinary specialties available at Winrock contributed at least some small amount of time to the project. The project was not large enough to justify paying the entire cost of an overseas visit but the incidental presence of another Winrock project made the exchange possible. Even if things progressed at a reasonable rate, at least three years will be required before change in the well-being of low income rural folk who are the final object of the assistance, can be expected.

The characteristics of this successful assistance effort emphasize that rather special circumstances are required for good results. Most of the technical assistance has been more indirect than this example, such as supporting the preparation of manuals and textbooks or planning national level research programs.

If AID/PVC wishes to have Winrock commit technical services to small PVO's it should be prepared to pay. Some fractional support for professional staff having job descriptions identified with the activities aimed at helping small PVO's would contribute to the maintenance of Winrock expertise in areas considered important to the PVC office. AID/PVC must judge if the contribution is justified by ranking the value of Winrock assistance activities with other ways these objectives are approached.

Women Participation: Most of the contacts in the program have been men. Two participants out of twenty-five at the Philippine workshop were women. They also participated as instructors with another woman from the Ministry of Agriculture. There was one woman instructor and one woman participant in each of the other workshops.

Most of the personnel from INSA who had contact with WI were women. Also their project in Haiti will involve women recipients as it is the custom for women to care for the goats.

Two women formed US based PVOs are on the mailing list: Afro-Care and the Organization of Negro Women. These organizations have not requested services.

In 1984, Elyda Djamaludin and a male colleague from the Central Research Institute for Animal Sciences, Bogor, Indonesia, received a small travel grant to come to Arkansas for three months of training on data management and information services. She worked on preparation of training materials including editing, graphic development, assembly of slide/audio tape presentations and production of video tape training cassettes. He spent his time learning photographic and printing techniques. Dr. Nystuen visited Ms. Djamaludin in Indonesia. She remarked that her training had been extremely useful for her job at CRIAS where she is in charge of the Communications and Training Department. Since their return they have produced a very professional slide and audio tape presentation and are just completing a video-tape training film.

One-half month of Richard Seller's time was charged to this training while the staff time of the Communications and Publications unit was not charged.

This type of on-the-job training is no doubt effective, but Winrock has very little capacity for it. However, currently they could probably not accommodate more than three or four such positions at any one time.

Financial Analysis: The ultimate purpose of the grant is to assist the efforts of PVO's and other institutions working overseas to develop food production processes and enhance the earning capacity of the rural community through improvement of livestock. The efforts are indirect, training trainers and facilitators who are the people in actual contact with poor farmers. There is little evidence of increased animal production or changes in quality of life of those ultimate recipients. The time has been too short. The first workshop ended in December 1983. If a participant started at that time a minimum of two years would be required to observe a final result. The person would develop a project proposal, get it funded, raise animals, deliver animals to recipient groups, help them raise the animals and finally see the farmers market or consume the products of their efforts. Programs such as this require a long time horizon.

Winrock staff should be urged to continue to monitor the activities of the final recipients of their services to obtain evidence of improved production or quality of life. Some evidence of such change should begin to appear during the life of a follow-on grant if one is obtained. The evidence is needed to judge the relative merits of various components of the program.

In terms of workload and output, the development of Training Materials and TA, apparently receives the most WI support.

In further analyzing the expenditures we have assigned percentages of the budget (\$1,344,000) as follows:

INFORMATION SERVICE :	16%	or	\$215,000
TRAINING MATERIALS :	41%	or	\$551,000
TECHNICAL ASSISTANCE:	24%	or	\$323,000
WORKSHOPS :	15%	or	\$202,000

Information Service: Annex 8 is a copy of a memo dated May 22, 1984 from R. Sellers detailing computer service costs for the information system. His plans call for an input of 20,000 items from May 1984 to September 1985 (17 months), and 170 client searches in the same period. Ninety-three percent of the projected cost is associated with input. In the period September 1983 to April 1984 only 55% of computer costs were for input. In both time periods, dividing computer costs by total users, yields around \$500 per user. It is not clear what proportion of the information budget is spent building the database from existing literature and how much is required to keep up with the literature. Also one must consider the half-life of an information item, that is, what percent of items are referenced after five years? The value of an average bit of information may be close to zero by that time. Suppose 16 users per month used a year's input data for five years, (192 users per year x 5 years = 960 users), the above costs would result in a cost of around \$70 per user.

Training: Although the development of training materials has received most budget support (est.41%), most of the needs have probably now been met. This is assuming the future training efforts will be limited to goat and sheep production which we recommend.

In evaluating the workshops we added the number of local instructors to the number of workshop participants for a total of 127 trained and/or exposed to the workshop materials in one degree or another and further analysis shows the cost per participant is:

$$\frac{\$202,000}{127 \text{ participants}} = \$1,590/\text{participant}/2 \text{ wks.}$$

We judge this to be a high cost per participant for an in-country training program. Especially it is high when the transportation costs and related travel is not included.

Technical Assistance: The 7.2PM of TA spent in the LDCs is 38% of the total 19PM furnished under the program while 8.9PM or 47% was spent in the US. Now we assume the weighted average cost (including overhead etc.) is \$10,000 per person month in the US and also that all of the remaining 11.8PMs (instead of only the 8.9PMs) were performed in the US, the cost would be \$118,000. Based on the above assumptions a monthly cost of \$14,583 is calculated for 1PM in the LDCs:

$$\begin{array}{r} \$323,000 \text{ total} \\ -118,000 \text{ in US} \\ \hline \$205,000 \text{ therefore estimated cost for LDC consultation and :} \end{array}$$

$$\frac{205,000}{7.2PM} = \$28,472/PM \text{ in LDCs}$$

The LDC cost is probably too high for the reported output.

RECOMMENDATIONS

1. INFORMATION SERVICES:

As it stands, the information system is a valuable resource, but to maintain it, takes considerable continuing financial support. WI management needs to review the program to establish its scope and purpose after taking into account the experiences gained in the last three years.

1A. Efforts need to accelerate to increase the number of users in order to better justify the financial resources that are required to keep the system current. We suggest, for example, that the service should be advertised in every issue of the BULLETIN. That is not being done currently. We suggest that each issue contain an explanation of how to use the information system and perhaps examples of actual uses.

1B. To avoid losing program continuity, the database manager position, currently vacant, should be filled as soon as possible. There is some problem with the career prospects for a person who takes the position. Having someone in this post with an advanced degree in animal science is useful for making judgements related to both input and output of the system. However, a long term career in information management may not appeal to someone trained in animal science. We suggest considering several options. Winrock could hire an animal scientist for the position and expect the person to move on in three or four years to another position at Winrock or elsewhere. As an alternative, a more permanent person might be found with a degree in library or information science. In this case, some institutional support from the other professionals on the staff would have to be developed to make available the technical input required of the system. Another possibility would be to hire an animal scientist with a substantial portion of time committed to the information system, and perhaps fifty percent of one clerical level person to help in posting new records and in responding to requests.

1C. The current computer used by the information service is too large for the system. We realize the computer is a sunk cost and it might as well be used for this purpose. However there are maintenance costs and service interruptions that affect the response time. We believe the information system would benefit if the computer were more utilized by other groups in Winrock. This may come about as a consequence of the merger. Otherwise some consideration should be given to replacing the computer with a small system dedicated to the information service only. Again this is a WI management decision with implications that go beyond the information system.

1D. The Winrock information service has gained a measure of recognition as a specialized source of information on small ruminants evidenced by inquires it receives from other data centers. We recommend that this specialization continue and that efforts not be undertaken to build comparable data sets on other animals, cattle, chickens or bees. Instead close liaison with other databanks specializing in these topics should be maintained. We view this as a cost effective way to create a strong identification for Winrock as an international repository of knowledge of animal sciences useful for development assistance.

1E. The information service must continue to comply with copyright laws as it has in the past. The information system is building a file of reprints by obtaining copies from the Institute of Scientific Information, or directly from the authors and other sources. For legal reasons the system's collection must remain separate from the Winrock Library, which under certain circumstances, may send a single copy of a copyrighted article to a user. Articles in journals that the library carries are not acquired. Thus the Winrock Library contributes to the information system. The system would benefit if the Library were improved. Improvements that we suggest be considered include employing a professional librarian and expan-

sion of the collection to make it more of a research library. If the Petit Jean Mountain location is to be used more extensively as the site for workshops in which students are required to do library research, expansion is advisable.

1F. AID/PVC should continue to support, on a matching fund basis, the Winrock animal agriculture information service. The publication of the BULLETIN on a matching fund basis is warranted given the informational role it plays in contacting private voluntary organizations in the field.

2. TRAINING:

2A. The training materials need to be put in more more simple language that is more readily interpreted to local conditions. The simple language would also be more easily translated.

2B. More workshops should be scheduled. They should remain at a size of about 25 participants, run for two weeks and continue to emphasize practical hands-on experience with live animals.

2C. Local instructors should continue to be employed. Consideration should be given to more advanced work with instructors to ensure they understand the purpose of the workshop and can have an input into designing their part of the program.

2D. Consider breaking the manual into several separately bound documents each dealing with a set of related topics.

2E. Support should be given for Winrock to continue conducting workshops on goats and sheep.

2F. Participants should continue to pay own travel but consideration should be given for small travel grants.

3. TECHNICAL ASSISTANCE SERVICES:

3A. We recommend that a greater proportion of effort be devoted to technical services. Some follow-up contacts with workshop participants to help them develop projects may be the best way to increase technical service activity.

3B. Provision of technical services through correspondence by the databank manager and staff as well as by the other professionals should continue. This method of exchange is efficient.

3C. Visits by PVO personnel to Winrock and neighboring facilities is effective although any significant increase in volume would soon become a burden. Some consideration should be given to combining practicums for foreign visits at U.S. farm enterprises with a joint workshop at Winrock devoted to training in proposal preparation, project management, etc. This may allow more effective use of WI professional time. It also seems more likely that PVO's and other foreign agencies would share the costs of consultancies by paying their personnel travel to come to the United States rather than paying Winrock personnel to travel overseas.

3D. Cooperative funding from PVOs for on-site technical services should be required to the extent possible, especially for high cost consultancies.

3E. The guideline requiring the cost of a Winrock consultancy not to exceed ten percent of the cost of total inputs to a project is reasonable and should be continued. However, this has the effect of eliminating some small projects. Therefore, Winrock should continue its practice of making visits to small projects in conjunction with travel overseas for other Winrock activities which can bear the travel costs.

3F. AID/PVC should consider continuing support for Winrock technical services at some level to be determined through consideration of other priorities. If funding is approved, support activities should be written into the job descriptions of identified Winrock professional staff.

PHASING CONTINUED SUPPORT

The possibility of continuing the technical assistance activities beyond the period of the grant was an issue from the beginning. A follow-on effort was mentioned in the original proposal (p.2). In the review dated December 21, 1983 of the first annual report a note was made to the effect that no effort to find support to continue the program had been started at that time. No formal action proposing a follow-on grant or seeking funds elsewhere has been taken as of March 1985. As the grant ends in September 1985 there is now a need for short-term funding to continue the program through a period during which a new grant proposal is submitted and negotiated. The delay initiating the present evaluation has contributed to stretching out actions to procure more funding. On the other hand some solid accomplishments can now be reported because of work completed by the end of 1984. These include the completed workshops, the goat and sheep health handbooks, the new software to operate the databank and several successful technical assistance efforts.

A follow-on matching grant from AID/PVC seems reasonable, in which case, a short term funding proposal is also reasonable. Some important momentum will be lost if the program is suspended for any length of time during which another grant is under consideration.

We recommend the following order of priorities be considered for continuing support by AID/PVC:

- (1) Workshops
- (2) Information systems
- (3) Technical services
- (4) The BULLETIN and TECHNOTES

WI MERGER

A merger with two other Rockefeller philanthropic entities is pending. These plans are to merge Winrock International with the ADC (Agricultural Development Council of New York) and IADS (International Agricultural Development Service of Arlington, Virginia). The new Institute, "Winrock International Institute for Agricultural Development" (WI), will have its headquarters in Arkansas.

WI will have an initial endowment of about \$28.5 million and the Winthrop Rockefeller Charitable Trust has announced a \$15 million grant which will become available on a matching basis if funds can be gathered from other sources. Spokesman for the merger believe this challenge can be met. The new WI will be the world's largest non-profit institute devoted to the improvement of agriculture. The New York City office will be closed. In addition to headquarters in Arkansas, a Washington D.C. office will be maintained.

The president designate is Mr. Robert Havener, formerly Director General of the International Center for the Improvement of Corn and Wheat (CIMMYT). He expects the merger will result in a professional staff of about 120 persons of which 70 will be posted overseas. He anticipates that these numbers will grow in the near future.

To insure continuity, the obligations and activities of the existing institutions will be continued during the transition. In particular interest and expertise in livestock research and education will be continued. Annex 2 is a copy of the statement of objectives and programs for the new organization and Annex 3 is a list of the Board of Directors of the new organization.