

TEAM EVALUATION REPORT OF  
PROJECT #931-0064  
(USDA RSSA 3-74)

April 4, 1982

Douglas L. Zweizig, Ph.D.  
Information Consultant

The Evaluation:

This is a report of recommendations from an evaluation of Agricultural Information and Related Services (Project No. 931-0064). This project provides funds to obtain information support for AID's agricultural program. The project functions through a RSSA with the Department of Agriculture and coordinates closely with the National Agricultural Library. The evaluation was supported by responses to letters of inquiry sent to clients of the services, by a management review of one of the services, and by visits to the service sites by an information consultant. These various methods of investigation are described below under the individual problems and issues. The Scope of Work for In-Depth Team Evaluation of USDA RSSA Agricultural Information and Related Services, Project No. 931-0064 (USDA RSSA 3-74) is attached as Appendix A.

The Evaluation Team:

The Evaluation Team met on March 11 and 16, 1982. The Team was made up of users of the project services and chaired by an outside consultant.

Evaluation Team

Robert Morris	S&T/AGR
Wayne R. Nilsestuen	LAC/DR/RD
Lamar Prosser	S&T/PO
Boyd T. Whittle	AFR/DR/AR
Earle Lawrence	S&T/DIU, Project Manager
David Donovan	S&T/DIU, Co-Manager
Douglas Zweizig	Team Chairman

Other attending

Pat Wetmore	USDA/OICD
Ernestine Pascal	MAXIMA Corp.
Carroll Collier	S&T/AGR
Harry Mattox	USDA/OICD
Raymond Meyer	S&T/AGR

The Problems and Issues list (Appendix B) served as a discussion guide and will be used to organize this report.

MICROFILMED FROM BEST  
AVAILABLE COPY

The Project:

The project is presently organized around three services:

**Technical Inquiry Service:** The long-standing service program under this project has been the Technical Inquiry Service. This service is designed to respond with custom packets of information to inquiries from AID agriculturists and has been functioning for almost ten years. It has achieved a high degree of familiarity with information sources, capacity to respond appropriate to requests, and ability to interpret queries from the field. It is located in the South Building with a special collection of materials and office files which facilitate efficient response to inquiries. (See Appendix C for the most recent program description and annual report.)

**AID-UPDATE:** A second major service program has just completed its pilot phase. AID-UPDATE is a service designed to perform computerized bibliographic searches on topics requested by AID agriculturists. Once a requester has received a bibliography of material available to date on the subject, regular updating bibliographies from the world literature are automatically sent to the requester. (See Appendix D, the management study of this service, for a fuller description of this service.) An adjunct service under this program, AID-COPY, provides documents or photocopies of desired items listed in the bibliographies. Materials for this service are obtained from the National Agricultural Library and other document sources. AID-UPDATE and AID-COPY were begun under this project as feasibility tests. AID-UPDATE is located in the National Agricultural Library with immediate access to the collections of NAL and to on-line bibliographic access facilities.

Special Support Activities by NAL: Special support activities by the National Agricultural Library is a third activity carried out under this project. While this activity has been limited to some specialized services such as AID-PEST (providing information on selected pesticides), specific entries into the AGRICOLA Data Base, and some special studies, this activity has considerable growth potential in the future. USDA specialists are located nationwide.

All three of these activities were examined under the scope of work of this evaluation. Special emphasis was placed on future directions as well as past performance by the USDA.

#### Problems and Issues:

1. Value of Technical Inquiry Service: How important are the services provided under this activity to AID missions and bureau agriculturists? The Team will analyze responses from a field survey to explore the question independent of contractors performance.

This issue focusses on the benefits of this type of service for its clientele while the following issue deals with how well the service is being performed. Evidence used in this discussion was derived from Annual Reports from the contractor (The most recent annual report is in Appendix C.), a visit to the TIS offices by the Evaluation Team Chairman, personal knowledge of the service of Evaluation Team members, responses to questions by Pat Wetmore, and responses to a letter of inquiry sent to users of the service.

The letter of inquiry (see copy in Appendix E) was sent to 220 direct-hire agricultural specialists in early February. This is the group which this service is mandated to serve, although not all of the 220 are active clients. In addition, three agricultural specialists were interviewed by phone and their responses were recorded on a standard form. Even though the inquiries were not pre-structured in questionnaire form, some comparable forms of data can be obtained from the responses and are presented here in tables. Full and representative response letters are contained in Appendix E.

As of March 22, 1982, 50 respondents sent letters responding to the inquiry, and three were interviewed by phone. Of the 53 respondents, 8 replied that they were unfamiliar with the service and could not provide any evaluation. This left 45 analyzable responses. The number of responses (n) for each question is listed for each response.

Respondent Rate of Use of TIS

	n	%
Not Used	5	11
Infrequent Use	11	24
Regular Use	29	64
Total	45	100*

\* Percentages may not add to 100 due to rounding.

In coding responses, use was judged to be "regular" if it were self-described as regular or was six or more times per year. "Infrequent" therefore means five or less times per year. "Not Used" means that the respondent said that the service has never personally been used or not used in the past year. Even though TIS provides information to meet single occasions of information need, 64% of the respondents gave indications of using the service six or more times in a year, signifying both the value and the satisfactory performance of the service.

How Respondent Learned of TIS

	n*	%
Print Source	3	10
Colleague	25	86
Other	4	14
Total	29	100**
Non-response	16	-

\* The n here is the number of respondents naming each source of learning about TIS. Individual ns add to more than 29 since multiple sources of information about TIS could be indicated.

\*\* Percentages are based on an n of 29 since 16 did not give a response to this question.

Of the 29 respondents speaking to this question, 10% learned of the service through articles about the service or AID memos. The major source for learning about the service came by word-of-mouth from colleagues, sometimes other agricultural specialists and sometimes recent IDI trainees who had visited the TIS offices. The 14% of other sources were IDI training, Pat Wetmore herself, and being referred from another DIU service. The high rate of colleague referral is confirmation of acceptance by the client group. From reading the letters, it appears that the large number of non-responses is due to lack of recall of when the service first came to the respondent's attention, because they have used it over a period of years.

Comparative Rating with other AID  
Support Services

	n	%
Of greater value	19	61
Of equal value	10	32
Of less value	2	6
<b>Total</b>	<b>31</b>	<b>100*</b>
Non-response	14	-

\* Percentages are based on an n of 31 since 14 did not give a response to this question. Percentages may not add to 100 due to rounding.

Respondents were asked to assess the importance of this service relative to "other support services received from AID/W." Of the 45 respondents, 31 gave responses that could be coded for this question. Coding decisions were conservative in that "Of greater value" was not coded unless the respondent clearly indicated that this service was more critical than other services. Therefore, the 61% judging it of more importance is probably an underestimate of what would have been obtained if the respondent had been pressed for a clearer statement of relative importance. One user noted that "If such a service as the Pat Wetmore Operation did not exist, it would have to be created."

After reviewing responses to the letters of inquiry, hearing responses to questions from Pat Wetmore, and discussion, the Evaluation Team concluded that TIS was a very valuable service and should be continued. A major concern of the Team was the need for more extensive and more continuous promotion of the service. This concern will be discussed under ISSUE #5.b below.

The Team noted that it was not possible to assess with precision the impact of knowledge and that therefore the emphasis should be placed on improving the utility of a service judged to be valuable. It was observed that this service provided a relatively low cost-high benefit utilization of already existing information available from research and represented a favorable use of support funds.

2. Quality of Service: How effective has the USDA Technical Inquiry Service performance been in fulfilling its mandate under the current Scope of Work? The user-survey data, annual report, and briefings by the USDA/staff will provide information useful for the analysis.

Evidence used for this issue came from the same sources as those used for Issue #1. In the letter of inquiry, respondents were asked for an indication of their evaluation of performance for the service.

Respondent Rating of TIS

	n	%
Excellent	38	86
Good	6	14
Poor	0	0
Total	44	100*
Non-response	1	-

\* Percentages are based on an n of 44 since 1 did not give a response to this question.

No respondent indicated any level of dissatisfaction with this service. Responses were coded "Excellent" if the expression of the quality of service included indications of more than satisfaction, such as the use of adverbs: "extremely

responsive," "highly satisfactory." In the absence of some indicator of special enthusiasm, a code of "good" was assigned. The rating by 86% of the respondents as "excellent" provides a strong indicator of quality performance as judged by users.

Respondent Suggestions for Areas  
of Improvement

	n	%
Advertise service	19	42
Improve speed	5	11
Total	45	100*
Non-response	23	-

\* Percentages are based on an n of 45, but will add to more than 100 since two respondents offered both suggestions.

Some of the respondents included suggestions for improving services, although most (51%) offered no suggestion. Notably, 42% of the respondents volunteered a suggestion that indicated a need for more extensive and continuing promotion of the service. The sense of the letters was that use of this service was episodic; that is, the service was used when particular occasions occurred (the beginning of a project, disseminating technology to LDC farmers) and that clients would forget about the service if not reminded at a time close to such an occasion. Letters also indicated that this valued and successful service needed to be made known to other agriculturists in AID. The comments about the need to improve speed did not refer to TIS performance but referred to the inherent time lags associated with international mails.

In addition, the Team noted that there seems to be a relatively small number of frequent users, when compared with the potential demand, and that it is time now to inform all potential users of the service.

The Team agreed that all indications are that the quality of performance is high. Two recommendations for improving services were noted. DIU needs to develop a guide to services in support of agricultural development. Agriculturists served by AID are not sufficiently aware of services offered or when and

where it is appropriate to request these services. At present, the different service points refer inquiries that would be better handled at another point. If users were better informed of the service options, they would be able to go directly to the appropriate point. DIU needs to develop a formal system for sharing information about the research interests of its agriculturists. (See memo from Robert Morris in Appendix F.) An information type of potential utility is knowledge of which agriculturists are working on similar problems or have recently requested similar subject searches. Connections between agriculturists are presently made on a case-by-case basis, but systems could be created to promote this activity. One mechanism suggested was the reporting of topics of inquiry by region and by commodity. Another was the creation of a directory of AID agriculturists with indications of areas of interest.

3. AID-UPDATE Pilot Program: Did this activity meet the needs of the users? What were the strengths and limitations of the service? Should this service be made available to more users? A separate user survey and independent management study will provide data for the evaluation team. Special services of this activity such as the S&T/AGR pesticide effort and information support to the postharvest food losses project will be evaluated.

Evidence evaluated for this issue were a management study conducted by MAXIMA, Inc. (See Appendix D.) presented by Ernestine Pascal, visits to the AID-UPDATE office by the team chairman, a report by Carroll Collier on the S&T/AGR pesticide service (AID-PEST), and results of a letter of inquiry sent to agriculturists served by AID-UPDATE.

The letter of inquiry regarding AID-UPDATE was sent in early February to approximately 200 users from a list supplied by Harry Dewey. As of March 22, 40 letters had been received in response. Of these 40, 5 respondents indicated that they were not aware of the service and could not offer evaluative comments, leaving 35 responses which could be analyzed. (See Appendix G for a text of the letter of inquiry and for representative response letters.)

Respondent Rate of Use of AID-UPDATE

	n	%
Not Used	5	14
Infrequent Use	5	14
Regular Use	25	71
<b>Total</b>		<b>100*</b>

\* Percentages may not add to 100 due to rounding.

Of the 35 respondents, 5 indicated that they were not current users of the service. Five said that they use the service but not on an on-going basis. Since this service is designed to provide an on-going series of bibliographies to users, the high level of regular use (71%) is to be expected.

Respondent Levels of Satisfaction with  
AID-UPDATE

	n	%
High	27	90
Low	3	10
<b>Total</b>	<b>30</b>	<b>100</b>

Of the 30 respondents who are users of AID-UPDATE, 90% gave indications of high ratings or levels of satisfaction with the service.

	n	%
Not Used	7	25
Primary Source	5	18
Supplementary Source	16	57
<b>Total</b>	<b>28</b>	<b>100</b>
Non-response	7	-

Of the 28 responding to questions about AID-COPY, 25% said they did not use this service. (Four of these respondents also did not use AID-UPDATE.) AID-COPY was the primary source of documents for 18% of those responding. For

59%, it is one source used among others for obtaining documents. This distribution is consistent with service policies which encourage use of AID-COPY only if documents are not otherwise available.

Respondent Levels of Satisfaction with  
AID-COPY

	n	%
High	20	95
Low	1	5
Total	21	100
Non-response	14	-

Letters were examined for indications of satisfaction with AID-COPY service. Of those giving an indication, 95% showed high levels of satisfaction.

How Respondent Learned of AID-UPDATE

	n	%
Print Source	6	21
Colleague	9	32
AID/DIU Staff	13	46
Total	28	100*
Non-response	7	-

\* Percentages may not add to 100 due to rounding.

Of those responding, 21% learned of this service through print sources such as articles in newsletters, promotional materials, or memos. Colleagues were the source for 32% of the respondents. The efforts of AID/DIU staff to promote this pilot service are reflected in the 46% of the respondents who learned of the service personally from AID/DIU staff.

After the Evaluation Team had reviewed the available evidence and had heard from users of the service, there was general agreement that the pilot phase of AID-UPDATE had shown that the service was valuable and feasible. It was

suggested that promotion of the service to appropriate users be coordinated with other DIU agricultural information services and that the AID-UPDATE forms be minimized and simplified to facilitate use. The Team recommended that AID-UPDATE should be supported at a level that will ensure service expansion and improve its targeting of appropriate users. The Team recommended that an evaluation be conducted at the end of three years.

Funding Levels: The Team was concerned that funding for this activity should be stabilized and should allow for needed growth. For AID-UPDATE, this funding projection was presented by DIU:

<u>Year</u>	<u>Number of Users</u>	<u>Funding Level</u>
1981	200	\$100,000
1982	500	200,000
1983	1,000	265,000
1984	2,000	300,000
1985	3,000	350,000
1986	4,000	400,000

It is estimated that there are 200 AID direct-line agriculturists. Additional users would come from other AID staff and PASA, RSSA, and IPA employees, contractors, Peace Corps, PVOs, LDC institutions, and others approved by AID missions and AID/W. The relationship is not linear because investments in technology and increases in efficiency will allow lower per user costs as the service grows.

4. Special Activities: The project, through agreements with the National Agricultural Library, has been exploring some special activities which (1) offer potential for coordinating with AID-sponsored information centers and mature and on-going databases, and (2) providing specialized information services to future field support programs such as the rainfed agriculture project. The Team will be asked to explore the value of earmarking some funds for experimental pilot activities aimed at exploring potential use of this RSSA as the focal point of an AID agricultural information network.

The Evaluation Team heard an explanation of the function of these special project activities by S&T/DIU, Earle Lawrence and S&T/DIU, David Donovan. They pointed out that AID could never reproduce a great agricultural research library such as NAL and could never recreate as comprehensive a data base as AGRICOLA. Therefore, the S&T/DIU strategy for meeting specialized agricultural information needs, calls for using NAL and AGRICOLA as the hub of an AID agricultural information network.

Activities underway currently include AID-PEST, some specialized entries into the AGRICOLA Data Base and some special studies. A major support role by NAL is envisioned in the future.

Special functions might include:

- a. Specialized information services. Some service needs occur in response to events or policy changes and require development of timely, focussed information services. AID-PEST provides a model of a service designed to meet a specific information requirement of AID's agricultural program. NAL support could be used to meet similar needs.
- b. Project backstopping. Currently, AID-UPDATE provides information support to AID's postharvest food losses and other projects. Additional support services might be provided by NAL.
- c. Providing the information component of future projects. AID projects often require the assembly of information from a wide range of sources cutting across many disciplines and involving a variety of database formats. For example, S&T/AGR, Raymond Meyer discussed his new project on dry-land agriculture with the Evaluation Team. He pointed out the software difficulties now faced in obtaining access to previously established, non-maintained databases. Past AID projects in other agricultural specialties have developed their own databases without ensuring

REPROFILMED FROM BEST  
AVAILABLE COPY

compatibility with existing major agricultural databases and without maintaining the databases beyond the life of the project. NAL's AGRICOLA can provide linkages between databases and insure continued access. Future agricultural projects might also look to NAL to recapture information "lost" in non-maintained databases and provide the technical information component needed for many mission support activities.

- d. New initiatives. To insure access to the kinds of information services cited above, NAL could provide studies, demonstrations, and limited pilot activities to potential users.

The Team recommended that the special activities carried out under the "support by NAL" activity have proved to be of great benefit and the current initiatives should be sustained. They endorsed the concept of making NAL the cornerstone of an AID agricultural information network and recommended that this project continue as the appropriate mechanism for planning and demonstrating the feasibility of new agricultural information services and products which DIU may create to meet needs of AID/W and field projects. The Team felt DIU should respond to demonstrated information needs with appropriate additional services. It was also suggested that DIU should encourage NAL to develop a mechanism to expand its acquisition of "international" agriculture documents, recognizing that NAL's primary mandate relates to domestic materials.

The Evaluation Team recognized the need with AID for policy direction and coordination of agricultural information services and databases. Specialized programs within the agricultural sector and individual projects are likely to continue to generate agricultural databases. The Team finds that DIU provides a logical focus for such activities and recommended that AID/DIU should have the authority for central planning and coordination of agricultural databases created under AID projects and that any new databases must be compatible with AGRICOLA. It was further requested that DIU should develop a policy statement relative to database creation to implement the recommendation. It was also suggested that contract, project planning, grant, and cooperative agreement documents should require compliance with these policies.

It was recommended that DIU, Data Management, and the National Agricultural Library need to work more closely and to ensure compatibility of information systems and products and that coordination among these groups be initiated at relatively high levels.

The Team recommended that this activity be funded at a level adequate to meet user demand. It was noted that all of the activities approved for continuation under this project are long-term on-going efforts and require consistent support. The Team recommended that S&T/DIU seek forward-funding for this project to facilitate operations and avoid end-of-year disruptions caused by funding uncertainties.

5. Growth of Services: Some services offered under the RSSA have been limited artificially by controlling demand. Preliminary results of field surveys indicate (1) users are aware of services from colleagues by word of mouth and (2) a strong feeling exists that the services should be regularly advertised. S&T/DIU needs guidance in developing a 1980's growth plan which includes:

- a. Staffing recommendations: At a number of points in the evaluation meeting, the need for coordination of services offered under this project was cited. Three of the users responding to letters of inquiry suggested that the TIS and AID-UPDATE should be coordinated more closely so that duplication of effort was avoided and so that users would not need to make the selection of which office to contact for service.

The Team recommended that, in the light of the present evolution of this project and of the need for future promotion and expansion, a full-time project manager should be obtained for this project. Discussion indicated that the person obtained should be an information specialist rather than an agricultural specialist because the duties will involve the design, promotion, management, and evaluation of information services.

The Evaluation Team considered that services under this project should attain stability and capacity for growth. Pat Wetmore indicated that any substantial increase in demand would increase the time required before her staff could respond to queries and that, having finally

achieved the number of professionals required for current demand, she lacks sufficient clerical staff. AID-UPDATE is able to meet current, pilot-phase needs but will need improved staffing if use increases. The Team recommended that DIU present a comprehensive management and growth plan for this project, including staffing and budget recommendations, to S&T Bureau directors, S&T/AGR, and S&T/PO in a thorough administrative review of this project.

- b. Promotion mechanisms: Based on user surveys and discussion at the evaluation, the Team recommended that an extensive and continuous promotion of project services be maintained, including a brochure, news releases, regular notices, continuation of IDI training, presentations to groups of AID agriculturists, etc.
  
  - c. User group priorities: The Team recommended that AID Missions and AID/W be first priority groups for service; the next priority group would include PASA, RSSA, and IPA employees; contractors; Peace Corps; PVOs; and LDC institutions.
6. User Funding: Several AID/W projects have been designed so S&T provides core activity funding, and regional bureaus and/or missions participate in financing in accord with their use of the service. Would this model work for this project, particularly with reference to program growth in 1985 and beyond?

The Evaluation Team discussed the issue of user funding at length. The issues are whether it should be totally centrally funded, core funded centrally with user supplement funds, or totally user funded. The Team felt that this issue was relevant to this project and that its implications were too great in scope to be resolved by this Evaluation Team alone. It is recommended that the issue of user funding be referred to the Sector Council as the appropriate forum, for their recommendation to AA/S&T.

7. Project Evaluation: This project has some built-in mechanisms for evaluating the impact and appropriateness of the services provided to AID missions. Can we design the services to make on-going evaluation more systematic and effective?

As a result of recommendations from MAXIMA and of Team discussion, the Team recommended that a simple, minimal feedback form be developed for use both by TIS and AID-UPDATE to check on the utility of the service delivered and to give the inquirer a point of access for remedial attention to a query. The Team also recommended that useful, standardized statistics be described for these services and be reported in a standard format on a regular basis to allow effective monitoring of the services. In particular, need for on-going data on turn-around times of various steps in the process was cited. It was also recommended that an information specialist and staff from DM be included in the development of evaluation procedures for the project activities.

Many other useful suggestions regarding agricultural information and DIU operations were made by the Team which fell outside the scope of this evaluation and have been referred to the appropriate project or program managers. For example, the need for DIU leadership in communications (specifically, telecommunications, electronic mail and satellite relay), planning, and coordination with AID/M/SER/DM has been referred to the DIU Review Committee which has representatives from all AID Bureaus.

Appendix A

## memorandum

DATE: February 19, 1982 *Earle G. Lawrence*

REPLY TO  
ATTENTION: S&T/DIU, Earle G. Lawrence

SUBJECT: Evaluation of USDA RSSA Project No. C064, Agricultural  
Information and Related Services.

TO: S&T/PO, Mr. Francis Campbell  
Room 216, SA-18

*Appendix  
A.*

The attached Scope of Work is for an evaluation of the USDA RSSA No. 0064 on March 11, 1982. We have had discussions about some of the preliminary steps we have taken to gather information for the team with S&T/PO, Lamar Prosser and S&T/PO, Thomas O'Keefe.

cc: S&T/PO, Lamar Prosser  
S&T/PO, Thomas O'Keefe

Attachment: a/s



Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

SCOPE OF WORK

FOR IN-DEPTH TEAM EVALUATION OF USDA RSSA

AGRICULTURAL INFORMATION AND RELATED SERVICES

PROJECT NO. 931-0064 (USDA RSSA 3-74)

A. Project Name and Number

Agricultural Information and Related Services, Project No. 931-0064

7/1/73	to	6/30/74	\$211,531
7/1/74	to	6/30/75	296,101
7/1/75	to	6/30/76	239,000
7/1/76	to	9/30/76	60,000
10/1/76	to	9/30/77	120,000
10/1/77	to	9/30/78	182,000
10/1/78	to	9/30/79	110,000
10/1/79	to	9/30/80	465,368
10/1/80	to	9/30/81	20,000
10/1/81	to	9/30/82	225,000

B. Implementing Organization

Office of International Cooperation and Development-U.S. Dept. of Agriculture

National Agricultural Library-U.S. Dept. of Agriculture

C. Purpose of Evaluation

1. To determine the extent of use of the Technical Inquiry Service by AID Agriculturists and AID priority clients.
2. To measure the effectiveness of the Technical Inquiry Service in fulfilling its Scope of Work and contributing to AID's programs.
3. To evaluate the AID UPDATE pilot effort and explore its importance to AID's Agricultural Support Activities.
4. To make recommendations on developing a 1980's growth plan for these activities.
5. To review current staffing and organization of the RSSA and make recommendations for improvements.
6. To explore possibilities for user-based funding options, with S&T/DIU supplying core funding and regional bureaus and/or missions participating according to use of services.

D. Members of the Evaluation Team

Team Leader

Douglas Zweizig, Ph.D., Information Transfer Specialist and consultant, will head the team and write the evaluation report. Dr. Zweizig has vast experience in research methods, communication, administration, planning and evaluation of information programs. He is familiar with the S&T/DIU program.

Team Members

AFR/DR, Boyd Whittle has over 15 years experience in the field with AID. He is interested in seeing the services of this RSSA put to greater use in Africa.

S&T/AGR, James Walker has a strong professional interest in technical information use and will represent S&T users of the RSSA services.

LAC/DR, Wayne Nilsestuen has served in missions in Pakistan and El Salvador. Part of his current responsibilities for LAC/DR include liaison with the S&T Bureau.

S&T/PO, Lamar Prosser is a 18-year veteran of development and program office service in Asia, Africa and Washington and will represent the S&T Program Office.

S&T/DIU, David Donovan is currently Development Information Division Chief and co-manager of the USDA RSSA, supervising information service activities.

S&T/DIU, Earle Lawrence is a Technical Information Specialist with the Utilization Division and Project Manager of the USDA RSSA.

E. Other Participants/Observers

USDS/OICD, Harry Mattox, Program Leader, Worldwide Programs, has had long-term management responsibilities for the RSSA. Mr. Mattox will be available for a prescribed period to answer financial and overall management questions about the RSSA.

USDA/OICD, Ms. Patricia Wetmore, Technical Information Officer, manages the Technical Inquiry Services. She will be available to answer specific questions about the services provided by her Office.

E. Other Participants/Observers (Cont'd)

S&T/AGR, Carroll Collier will brief the team about the special pesticide inquiry service set up under the AID UPDATE program.

S&T/AGR, Robert Morris will brief the team about the use his post-harvest food losses projects have made of AID UPDATE.

Ernestine Pascal, International Specialist with Maxima Corporation, assisted with a management study of the AID UPDATE and will brief the team on the service.

Others - interested staff members of S&T/DIU, S&T/AGR, and regional bureau technical offices are invited to observe and provide the team with user feedback.

F. Date and Place of Evaluation

March 11, 1982  
1 p.m. to 5 p.m.  
1735 N. Lynn St., Room 510, SA-14  
Rosslyn, Virginia

G. Cost Analysis

Direct costs will be under \$3,000 and will be covered by Project funds.

H. Project Background

No project paper or log frame matrix has been officially submitted for this project. A matrix was apparently developed and used for the 1975 review and 1976 Project Appraisal Report (PAR), however, it is out of date.

The evaluation will focus on the effectiveness of the RSSA in carrying out the current Scope of Work (attached), and in developing recommendations for a growth plan for the 1980s.

I. Problems and Issues

Value of Technical Inquiry Service

How important are the services provided under this activity to AID missions and bureau agriculturists? The team will analyze responses from a field survey to explore the question independent of contractor performance.

## I. Problems and Issues (Cont'd)

### Quality of Service

How effective has the USDA Technical Inquiry Service performance been in fulfilling its mandate under the current Scope of Work? The user-survey data, annual report and briefings by the USDA/Staff will provide information useful for the analysis.

### AID UPDATE Pilot Program

Did this activity meet the needs of the users? What were the strengths and limitations of the service? Should this service be made available to more users? A separate user survey and independent management study will provide data for the evaluation team. Special services of this activity such as the S&T/AGR pesticide effort and institutional support to the post-harvest food losses projects will be evaluated.

### Special Activities

The project, through agreements with the National Agricultural Library, has been exploring some special activities which (1) offer potential for coordinating with AID sponsored mature and on-going data bases, and (2) providing specialized information services to future field support programs such as the rainfed agriculture project. The team will be asked to explore the value of earmarking some funds for experimental pilot activities aimed at exploring potential use of this RSSA as the focal point of an AID agricultural information network.

### Growth of Services

Some services offered under the RSSA have been limited artificially by controlling demand. Preliminary results of field surveys indicate (1) users are aware of services from colleagues by word of mouth and (2) a strong feeling exists that the services should be regularly advertised. S&T/DIU needs guidance in developing a 1980's growth plan which includes:

- a. Staffing recommendations
- b. Promotion mechanisms
- c. User group priorities

MICROFILMED FROM BEST  
AVAILABLE COPY

I. Problems and Issues (Cont'd)

User Funding

Several AID/W projects have been designed so S&T provides a core activity funding and regional bureaus and/or missions participate in financing in accord with their use of the service. Would this model work for this project, particularly with reference to program growth in 1985 and beyond?

Project Evaluation

This project has some built-in mechanisms for evaluating the impact and appropriateness of the services provided to AID missions. Can we design the services to make on-going evaluation more systematic and effective?

J. Documents

A briefing book will be assembled for team members which will include the project Scope of Work, the current PAF (Project Authorization and Request for Allotment of Funds), PIO/Ts (Project Implementation Order/Technical Services), annual reports, a special management study, user survey data, and previous PAR (Project Appraisal Reports) and evaluations.

S&T/DIU: EGLawrence:ds1:2/19/82

# AGRICULTURAL INFORMATION AND RELATED SERVICES

USCA RSSA PROJECT NO. 0064

FY 1982

## SCOPE OF WORK

### I. Response/Referral Activity

- a. Carry out searches (bibliographic, literature and data bank and from other sources) based on requests from USAIDs, AID/W and from appropriate host country institutions.
- b. Refer to appropriate subject matter specialists within the USDA-Land Grant System for specific responses to any requests from USAIDs or AID/W which need such treatment.
- c. Respond to routine requests for copies of printed materials in the form to be determined by S&T/DIU.

### II. On-Call Technical Information and Utilization Support Services

- a. Assist in production of technical publications or utilization materials as requested by S&T/DIU and carry out necessary distribution.
- b. Assist in personnel recruitment and contracting whenever required for special information management or planning activities as directed by S&T/DIU. Such activities may include editing, writing, revising of technical publications, translating, preparation of distribution lists, and dissemination.
- c. Provide back-up bibliographic and information management services to the Information and Documentation Division as requested by S&T/DIU.

### III. AID Support by National Agricultural Library (NAL)

- a. Purchase specific publications related to food production or nutrition for AID/W and USAIDs as requested, and carry out necessary distribution.
- b. Acquire, convert and adjust computerized or other bibliographic files sponsored or generated by AID and enter in AGRICOLA.

- c. Take full responsibility for implementing the AID UPDATE Program including:
  - 1. Provision of computer work, mailing, TIS staff time and consultations.
  - 2. Management of the University of Maryland and other contracts approved by AID to provide technical personnel and document delivery.
- d. As requested by AID, enter cooperative agreements for bibliographic input from international expert centers for subjects of particular value to developing countries.
- e. As requested by AID, technical assistance and training to selected LDC institutions and individuals.

#### IV. Staffing Capacity To Meet Workload

The Scope of Work for the FY 1982 RSSA differs from that of the 1981 RSSA in the provision of one part-time professional to the core staff to strengthen the Response/Referral Activity and a modest increase in short-term support services. Other increased costs in the budget are due to standard inflationary increases.

#### V. Administrative and Miscellaneous Costs

Increased costs in this area are due to standard inflationary increases.

PROJECT NO. 931-0064

AGRICULTURAL INFORMATION AND RELATED SERVICES RSSA

<u>FY 1981 1/</u> <u>(\$000)</u>	<u>FY 1982 Budget</u>	<u>FY 1982</u> <u>(\$000)</u>
	<u>I. Core RSSA Information Staff</u> <u>(USDA Direct-Hire)</u>	
28	Technical Information Specialist (GS-12 Project Leader)	30
25	Technical Information Specialist	28
00	Technical Information Specialist	28
19	Technical Information Assistant	20
00	Technical Information Clerk	18
<u>72</u>	<u>SUB-TOTAL</u>	<u>124 1/2</u>
	<u>II. Limited Term Support Services</u> <u>(Part-Time or Contract)</u>	
25	Librarian/Information Specialists	35
10	Bibliographer/Information Specialists	20
20	Extension Editor/Communications Specialist	30
<u>55</u>	<u>SUB-TOTAL</u>	<u>85 3/4</u>
	<u>III. AID Support by NAL</u>	
108	Librarian/Information Specialists (University of Maryland Contract)	110
50	CALS (Computer Time & Document Delivery)	33
<u>158</u>	<u>SUB-TOTAL</u>	<u>143</u>
	<u>IV. Administrative and Miscellaneous Costs</u>	
20	Publications - Purchase in Support of Inquiry Service to missions	20
80	Overhead (@ 22 percent)	60 4/5
<u>100</u>	<u>SUB-TOTAL</u>	<u>80</u>
<u>385</u>	<u>TOTAL</u>	<u>432 5/8</u>

FOOTNOTES

- 1/ Line items consolidated from 1981 Budget Scope of Work.
- 2/ Increase results from addition of Technical Information Specialist to strengthen Technical Inquiry Service, filling vacant Information Clerk position, and normal federal pay raises.
- 3/ Increase results from additional short-term technical support for AID-UPDATE and Inquiry Services plus support for in-depth evaluation.
- 4/ USDA overhead reduced from 25 to 22 percent. Decrease in miscellaneous expenditures.
- 5/ Total Budget anticipates \$200,000 carryover from 1981.

Appendix B

AM  
B

EVALUATION: USDA RSSA PROJECT NO. 0064  
AGRICULTURAL INFORMATION AND RELATED SERVICES  
MARCH 11, 1982

AGENDA

- 1:00 - 1:30      Scope of Evaluation    - - - - -    Doug Zweizig
- 1:30 - 2:30      Response to Team's Questions  
About Technical Inquiry Service - -    Pat Wetmore
- AID UPDATE Presentation    - - - - -    Ernestine Pascal
- Special Users Statements    - - - -    S&T/AGR Specialists
- 2:30 - 3:00      Discussion of Technical Inquiry  
Service. Issues No. 1 & No. 2.
- 3:00 - 3:10      BREAK
- 3:10 - 3:30      Discussion of AID UPDATE -- Issue No. 3
- 3:30 - 4:30      Discussion of Project -- Issues Nos. 4 - 7
- 4:30 - 5:00      Review of Recommendations

## PROBLEMS AND ISSUES

1. Value of Technical Inquiry Service: How important are the services provided under this activity to AID missions and bureau agriculturists? The team will analyze responses from a field survey to explore the question independent of contractor performance.
2. Quality of Service: How effective has the USDA Technical Inquiry Service performance been in fulfilling its mandate under the current Scope of Work? The user-survey data, annual report and briefings by the USDA/Staff will provide information useful for the analysis.
3. AID UPDATE Pilot Program: Did this activity meet the needs of the users? What were the strengths and limitations of the service? Should this service be made available to more users? A separate user survey and independent management study will provide data for the evaluation team. Special services of this activity such as the S&T/AGR pesticide effort and institutional support to the post-harvest food losses projects will be evaluated.
4. Special Activities: The project, through agreements with the National Agricultural Library, has been exploring some special activities which (1) offer potential for coordinating with AID sponsored mature and on-going databases, and (2) providing specialized information services to future field support programs such as the rainfed agriculture project. The team will be asked to explore the value of earmarking some funds for experimental pilot activities aimed at exploring potential use of this RSSA as the focal point of an AID agricultural information network.
5. Growth of Services: Some services offered under the RSSA have been limited artificially by controlling demand. Preliminary results of field surveys indicate (1) users are aware of services from colleagues by word of mouth and (2) a strong feeling exists that the services should be regularly advertised. S&T/DIU needs guidance in developing a 1980's growth plan which includes:
  - a. Staffing recommendations
  - b. Promotion mechanisms
  - c. User group priorities
6. User Funding: Several AID/W projects have been designed so S&T provides a core activity funding and regional bureaus and/or missions participate in financing in accord with their use of the service. Would this model work for this project, particularly with reference to program growth in 1985 and beyond?
7. Project Evaluation: This project has some built-in mechanisms for evaluating the impact and appropriateness of the services provided to AID missions. Can we design the services to make on-going evaluation more systematic and effective?

# Appendix C.

Appendix  
C.

REPORT FOR FISCAL YEAR 1981--RSSA NO. 3-74  
AGRICULTURAL INFORMATION AND RELATED SERVICES  
U.S. DEPARTMENT OF AGRICULTURE

Submitted to the Agency for International Development by:  
Worldwide Programs, Technical Assistance  
Office of International Cooperation and Development

CONTENTS

Obligations for Fiscal Year 1981..... 2

Technical Inquiries and Information Researching..... 3

Statistical Report of Information Services.....12

RSSA OBLIGATIONS FOR FISCAL YEAR 1981\*

Salaries.....	\$ 60,116
Benefits.....	5,003
Other.....	200
Rent and Mailing Charges.....	335
Printing.....	178
Contracts (includes Letter of Agreement with FAO).....	47,882
Supplies (includes purchase of books and subscriptions).....	13,019
Agency Agreement (National Agricultural Library).....	74,483
Sub-total	201,216
Overhead.....	46,280
Total	247,496

\*Actual expenditures will be provided after all bills have been received.

## TECHNICAL INQUIRIES AND INFORMATION RESEARCHING

The AID/USDA technical inquiry service is a comprehensive literature re-searching service for USAID missions and developing-country institutions that encompasses all areas of the agricultural sciences. Its objective is to identify, select and provide USAID on request technical and extension materials that are needed in the design and implementation of agricultural programs overseas. The literature sent in response to USAID inquiries for this information is obtained from both U.S. and worldwide sources. The primary users of the service are the agriculture staffs of the USAID missions throughout the world, their contractors and PASA employees; and the agriculture staffs of AID's Bureaus in Washington. Secondary users include USAID counterparts in LDC Ministries of Agriculture, national agencies and agricultural institutions.

The literature requested by AID and host-country institutions spans the whole range of the agricultural sciences and includes: tropical horticulture and agronomy and production of specific tropical food and fibre crops; processing (on the village and industrial level) of food crops primarily for local consumption; livestock production practices, including the raising of poultry, beef and dairy cattle, goats and sheep on small and large farms; processing meat and dairy products in small and large-scale operations; world and U.S. market and trade information related to the developmental process; soil and water conservation practices in the tropics; management and control of invertebrate pests in the tropics; utilization of indigenous energy sources and renewable natural resources; tropical forestry, including afforestation, reforestation, agroforestry, and forest products; and appropriate technologies in agriculture, primarily in crop production and processing. In addition to citations to worldwide references, both technical and extension materials are provided, depending on the nature of the request.

The RSSA staff is part of the Department's Office of International Cooperation and Development, USDA's agency for coordinating activities with

AID and international organizations. During Fiscal Year 1981 it was staffed with three USDA employees: a Technical Information Officer, a Technical Information Specialist (Biological Sciences), and a Technical Information Assistant.

The staff performs extensive subject searches when the scope of the inquiry calls for technical information that is contained in the worldwide literature of agriculture. In providing technical literature in response to requests, RSSA information specialists perform extensive manual searches and utilize all standard reference aids to the worldwide literature, e.g. the thirty-two abstract journals of the Commonwealth Agricultural Bureaux, AGRINDEX, Abstracts on Tropical Agriculture, specialized indexes and bibliographies in the agricultural sciences, the Botany Subject Index of the National Agricultural Library, directories of research centers, trade associations and professional organizations, the Bibliography of Agriculture, indexes and listings of the publications of the Department of Agriculture, and the Catalogue of the National Agricultural Library, to name a few. Also utilized are information resources of agricultural institutes, research laboratories and worldwide centers such as the Tropical Products Institute, Food and Agriculture Organization, Intermediate Technology Development Group, Ltd., ICRISAT, CIAT, IITA, IRRI, agricultural colleges in Asia, Africa and Latin America, and land-grant universities in the United States.

In addition, the major bibliographic data base files relating to agriculture and food processing are utilized to obtain citations of the worldwide literature. The most frequently utilized files include: AGRICOLA (National Agricultural Library), CAB (Commonwealth Agricultural Bureaux), and FSTA (Food Science and Technology Abstracts).

After citations relating to the inquiry have been located either by manually searching the applicable abstract journals and bibliographies or by

searching data-base files on-line, the information specialist obtains the books, reports, journal articles, publications or conference proceedings from libraries and information centers within USDA. The specialist then examines, compares and makes a critical evaluation of the sources of information; analyzes the research literature and authorities to resolve the problem; and contacts experts in the exact field of research to update any questionable information or to furnish information not contained in the published literature. Frequently reprints, conference proceedings and reports are requested from experts in Africa, Asia, Europe and Latin America.

The information provided USAID requesters is selected specifically to meet the climatic, geographic, technological and language requirements of the country in which the information is needed. Based on the nature of the inquiry, the information provided requesters can be either the latest available, i.e. that printed within the last three to five years, or that published fifty to a hundred years ago by the USDA and/or worldwide sources. In some cases the information needed is contained in obscure articles or reports that can be identified only after evaluating and analyzing numerous indexes, abstract journals and "references" sections of journal articles and monographs. At times relevant "fugitive" documents that are not indexed in the mainstream of the worldwide literature are also identified and obtained from sources in developing countries.

Once the search is completed, findings are transmitted to the requester in the form of authoritative literature that fully and completely answers the question or resolves the problem and/or citations to items from worldwide sources.

Information and analysis packages prepared for USAID missions during Fiscal year 1981 spanned the following areas:

#### CROP PRODUCTION AND AGRONOMIC PRACTICES

USAID/Bolivia on cultivation, processing and economics of jojoba production

USAID/Ghana on production of sunflower seeds for oil and on production of peanut and jojoba

USAID/Burma on cultivation of rapeseed and mustard seed

USAID/Panama on cultivation and utilization of turmeric

U.S. Embassy/Rwanda on cultivation of the abaca plant

USAID/Burma on production of rice and cottonseed

USAID/Dominican Republic on plant species that can be cultivated on marginal lands by small farmers for production of food and energy

USAID/Burma on production of soybeans, peanuts, sunflower and sesame

USAID/ROCAP on cost of production, estimated returns and general production practices for rubber, oil palm, black pepper, vanilla, ginger, and cacao

USAID/Guinea-Bissau on general millet production practices

USAID/Jamaica on jojoba production

USAID/Portugal on soil correction

USAID/Guyana on citrus production

USAID/Tunisia on germination and development of smilo grass

USAID/Kenya on drought stress and drought resistance in corn, sorghum, cassava, cowpeas, pigeon peas and beans

USAID/Guinea-Bissau on cassava and maize cultivation

USAID/Kenya on cassava and pigeon pea production

USAID/Mauritania on intercropping vegetables and its effect on pest control

USAID/ROCAP/Guatemala on tissue culture and cell culture in screening for disease resistance in coffee and cacao

USAID/Thailand on production, processing, storage and marketing of vegetable and flower seeds

USAID/Tunisia on varieties, management and utilization of forage millets

USAID/Peru on potato, barley and wheat production

USAID/Guyana on sunflower production and processing under tropical conditions

USAID/Burma on cultivation and utilization of the winged bean

USAID/Bolivia on grape cultivation and raisin and wine production

USAID/Paraguay on methods of frost protection for frost-sensitive crops

USAID/Tunisia on seed treatments for improving germination of Indian ricegrass (Oryzopsis hymenoides)

USAID/Paraguay bibliographic information and select worldwide citations to the literature available on strawberry, banana and pineapple

USAID/India on aerial application of seed, fertilizer and pesticides for wheat and rice

USAID/Ghana on commercial cultivation of jojoba

#### LIVESTOCK PRODUCTION

USAID/Ghana on breeding, diseases, housing and management of rabbits

USAID/Cameroon on cattle-dipping vats

USAID/Portugal on production of beef, dairy cattle, goats and sheep

USAID/Kenya on non-irritating shoulder and head harnesses for zebu cattle and on harnesses and yokes for draught milch cows

USAID/Pakistan on lentil varieties and world lentil production statistics

USAID/Mali on trypanosomes in cattle and small ruminants

USAID/Tunisia on utilization of ammonia to increase the protein content of wheat straw for ruminants

#### PEST MANAGEMENT AND CONTROL

USAID/Ghana on Federal regulations governing the safe handling and application of pesticides

USAID/Guinea-Bissau on the biology, methods of control, and damage and loss assessment of the insects Diopsis thoracica, Diopsis apicalis, Heteronychus oryzae, Sesamia calamistis, Chilo zacconius, Buseola fusca, and Sesamia spp.

USAID/Cameroon, Senegal and Guinea-Bissau on control of witchweed (Striga spp.)

USAID/Guinea Bissau on methods of estimating grasshopper populations

USAID/Senegal on the biology of and rearing techniques for the sweet potato weevil (Cylas puncticollis)

USAID/ROCAP/Costa Rica on control of the strawberry cyclamen mite, Steneotarsonemus pallidus

USAID/Guinea Bissau on methods of fumigating peanuts; and on nuclear polyhedrosis virus and Bacillus thuringiensis Berliner

#### POSTHARVEST TECHNOLOGIES

USAID/Jamaica on on-farm storage of fruits and vegetables

USAID/Tunisia on harvesting, processing and cleaning annual medics (Medicago spp.)

USAID/Upper Volta on methods of potato storage at the farm and village level and under arid conditions

USAID/Tunisia on harvesting and cleaning subclover (Trifolium subterraneum)

#### FOOD PROCESSING AND USES OF AGRICULTURAL PRODUCTS

USAID/Ghana on processing peanuts, jojoba and sunflower seeds for oil

USAID/Tunisia on the process for extraction of germ from the wheat grain

USAID/Burma on processing rapeseed and mustard seed

U.S. Embassy/Rwanda on processing and uses of the abaca plant

USAID/Burma on processing of rice and cottonseed

USAID/Mali on small-scale processing of cashew nuts, cashew-nut-shell liquid, karite butter and tamarind juice

U.S. Embassy/Rwanda on processing and utilization of banana fibre

USAID/Burma on processing and utilization of soybeans, peanuts, sunflower and safflower

USAID/Honduras on small-scale processing of dairy products

USAID/Peru on milling and nutritive value of brown rice

USAID/Thailand on processing pineapple, strawberries, peaches, oranges, rambutan, mangoes, tomatoes, string beans, bean curd, and cucumbers; and on processing and marketing soybeans, peanuts, castor, and sesame

USAID/Bolivia on processing fruits and vegetables

USAID/Zaire on manioc grinders and hand-held corn shellers

#### ENERGY

USAID/Nepal on production and utilization of fuel alcohols

USAID/Ghana on the utilization of sweet sorghum in the production of alcohol; and on biogas systems and solar heaters and cookers

#### SOIL AND WATER CONSERVATION

USAID/Bangladesh on hand-powered and animal-powered irrigation pumps that are alternatives to the Number 6 pump

USAID/Mauritania, Cameroon and the Sudan on pond covers to reduce evaporation and on liners to reduce seepage

USAID/Peru on planning, implementing and managing small-scale irrigation projects

USAID/Senegal on sources of films on reforestation, environmental protection, and brush and forest fire control

USAID/Peru on conservation and management of soils in the tropics

USAID/Nepal on revegetation and simple structural reclamation of land

#### FORESTRY

USAID/Caribbean Regional Development Office on the tree and shrub species suitable for "living fences" in the drier parts of the eastern caribbean

USAID/Mauritania on broadcast and aerial seeding of range and forest land

USAID/Peru on low-jungle development or tropical reforestation

USAID/Barbados on agroforestry for designing a rural afforestation program for small farmers

MISCELLANEOUS

USAID/India general, statistical information on agricultural development and population in developing countries

USAID/Dominican Republic on world market prices and production of macadamia nuts, jojoba and black pepper

USAID/Guinea on the history of silos in the United States

USAID/ROCAP/Guatemala on agribusiness export development for fresh and processed fruits and vegetables

USAID/Kenya on organization and operation of demonstration farms in the United States

USAID/Mauritania on descriptions and sources of hay-baling equipment

USAID/Panama on catching, processing and utilizing sharks

USAID/Haiti on cocoa production and exports in the Caribbean

USAID/Philippines on land tenure in the Philippines

USAID/Ghana on rural development, integrated rural development and development planning

USAID/Ghana on home economics and sanitation in developing countries

USAID/Gambia on nutrition and its interrelation with agricultural economics, education and health

USAID/Jamaica on costs of milk production in the United States

USAID/ROCAP/Guatemala on audio-visual techniques and programmed instructional units

In addition to preparing information packages, literature searches of limited scope are performed and ready-reference questions are answered in response to USAID and AID/W requests for information on USDA's programs and research activities and for USDA publications. For example, publications on irrigation and drainage engineering from USDA's Soil Conservation Service and technical reports from Federal Research Laboratories and experiment stations are in constant demand by USAID agriculturalists throughout the world. Inquiries about USDA and AID programs

and availability of related Departmental publications are also received from governmental agencies of LDCs, Peace Corps volunteers, U.S. government officials, and individuals in development and developing nations.

In addition, requests for specified monographs, reports and other documents from commercial and governmental sources are expedited for USAID and AID/W officials. Books are purchased for use by individual offices at AID/W and USAIDs and in bulk quantities for distribution to USAIDs and other target groups by AID/Washington. Publications and reports from worldwide sources are also obtained and transmitted on demand for USAID and AID/W requesters.

A statistical summary of the information services provided by the Technical Inquiries Group, Office of International Cooperation and Development, follows on page 12.

STATISTICAL REPORT OF INFORMATION SERVICES--FISCAL YEAR 1981

In Response to Requests

Services provided to	No. of Clients	Ref. Requests	Titles used/or delivered	Database Search on-line	Manual Search/bibliog. prep.	Info. Package
<b>AID Field Missions:</b>						
AFR	172	109	851	61	54	53
ASIA	59	96	199	31	41	36
LAC	112	91	502	44	49	41
NE	7	4	16			
<b>LDCs (Ind. &amp; Inst.)</b>						
Africa	20	17	134		3	
Asia	10	9	39	2		
Latin Am.	28	24	198	1	7	4
Near East	2	2	2			
<b>AID/W</b>						
AFR	11	12	11			
ASIA	11	14	20		1	1
LAC	10	9	30			
NE	5	5	24			
DSB	135	138	158			2
Others					5	3
<b>AID Contractors/Grantees</b>						
	115	117	124		1	1
<b>Int.Org./Inst.</b>						
	12	12	7			
<b>US Govt.</b>						
	61	61	47			
<b>US Public</b>						
	50	53	60			
<b>DCs</b>						
	7	7	5			
<b>TOTALS</b>	<b>827</b>	<b>780</b>	<b>2429</b>	<b>139</b>	<b>161</b>	<b>141</b>

# APPENDIX D

Appendix  
D

**MANAGEMENT REVIEW**  
of the  
**AID-UPDATE SERVICE**

March 11, 1982

Submitted to  
The Office of Development Information Utilization  
Science and Technology Bureau  
Agency for International Development

by  
The MAXIMA Corporation  
7315 Wisconsin Avenue, Suite 900N  
Bethesda, MD 20814

**MAXIMA**

# INDEX

Page

INTRODUCTION.....	1
Section I:	
AN OVERVIEW OF THE SDI CONCEPT.....	2
Section II:	
DESCRIPTION OF SDI SERVICE AT AID/NAL.....	5
CALs Service.....	5
AID-UPDATE Services.....	5
Section III:	
AID-UPDATE OPERATIONS.....	9
Section IV:	
MANAGEMENT RECOMMENDATIONS.....	11
Improving Service to Users.....	11
Growth of Service.....	13
Summary.....	13
APPENDIX A.....	14
APPENDIX B.....	21

## INTRODUCTION

This management review of the AID-UPDATE service is divided into four main sections and two appendices. The concept of selective dissemination of information (SDI) is critical to understanding the operation of AID-UPDATE and Section I is designed to give the reader a general understanding principles of SDI services. Section II describes CALS (Current Awareness Literature Service), the Department of Agriculture's SDI service that AID-UPDATE was patterned after, and the AID-UPDATE services in detail. Section III describes the AID-UPDATE operation in terms of its personnel resources, other resources, and use. MAXIMA has made several recommendations regarding improving the service and increasing the use of the service in Section IV. APPENDIX A contains a sample SDI search provided through AID-UPDATE, and a copy of the form used to order documents through AID-COPY. APPENDIX B contains summaries of the AID-UPDATE monthly reports that were used by the review team in completing this management review.

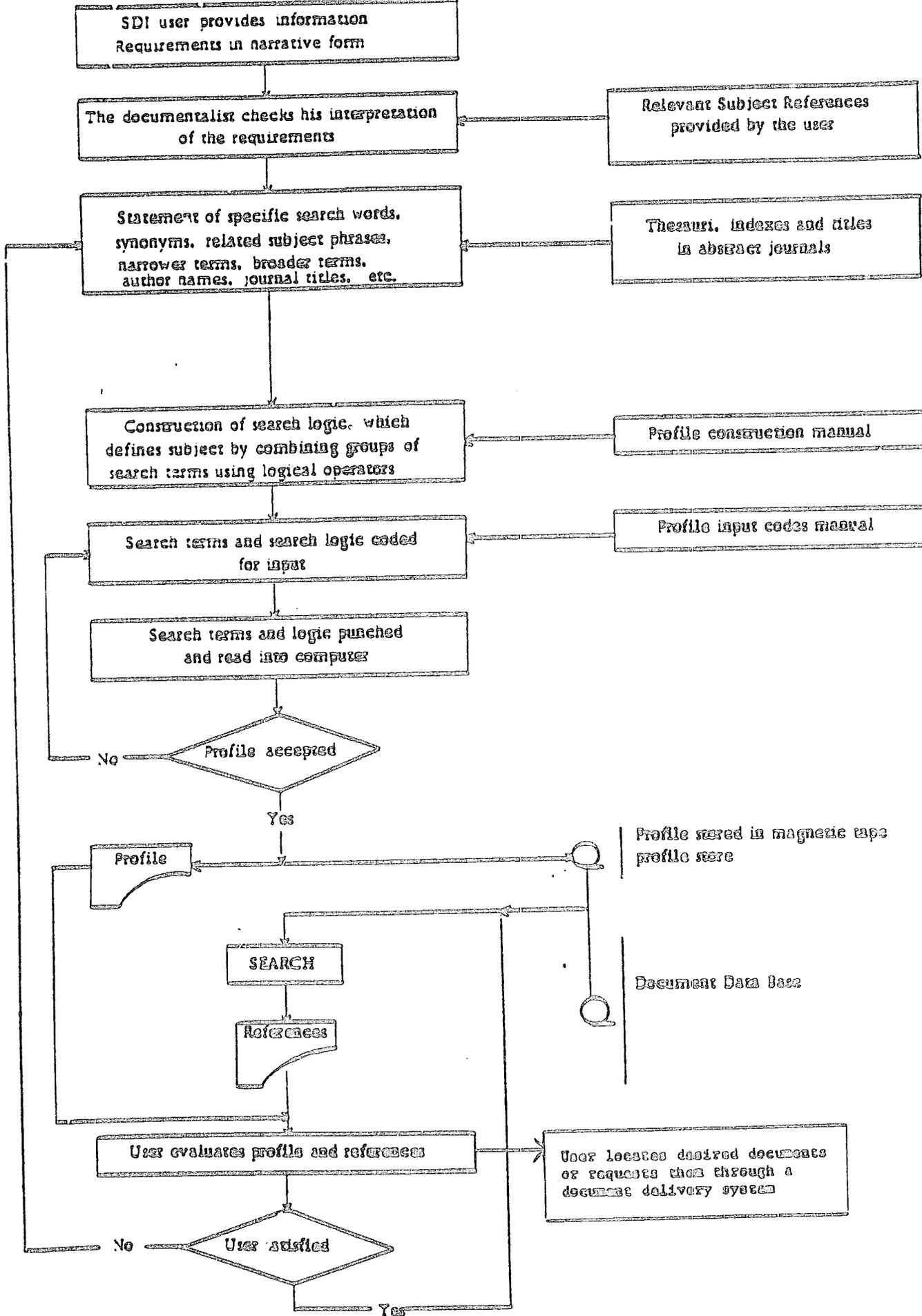
Section I  
AN OVERVIEW OF THE SDI CONCEPT

The proliferation of information, particularly in the scientific and technical disciplines has required development of a mechanism for scientists, researchers, and decision-makers to selectively acquire information and literature that is highly relevant to their particular information needs. Selective Dissemination of Information (SDI) is the phrase that describes a widely used process that has evolved to accomplish the efficient transfer of information from today's voluminous automated bibliographic databases to users. In a typical SDI service, a user defines his particular information needs resulting in what is called a "profile," which is then matched periodically against a file of document citations to identify items with a high probability of interest to the user. Once relevant documents are identified, the user routinely receives a list of document citations. Many SDI services also provide a document delivery service to aid users in obtaining documents that are identified through SDI services. To ensure that the service effectively meets needs, it should also have a built-in method of obtaining feedback from the user to indicate his satisfaction with the relevance of the information being provided and for updating his profile. The SDI process can be shown graphically in Figure 1, which was modeled after a design presented by S.C. Schuler in "Selective Dissemination of Information," included in Scientific and Technical Information Why? Which? Where? and How? published by the Advisory Group for Aerospace Research and Development of the North Atlantic Treaty Organization, 1970.

Although the SDI concept is initially simple, use of such systems has indicated that there are complex relationships of factors which influence the success of SDI services. Some of these are highlighted below:

- o Most SDI services retrieve citations from large automated data files. Access is provided through indexes. The terms in the index and the language of the users must accurately describe the same phenomena to effectively retrieve information.
- o A technical user's interest profile may require considerable effort to construct. It is often necessary for an intermediary from the SDI service to negotiate and clarify the user's needs so that appropriate terms from the index language are chosen.

- o Users require high ratios of citations they find relevant to the total identified in the SDI search in order for the service to be cost beneficial. This condition requires that user profiles be examined and refined frequently.
- o The presentation of information identified through an SDI service will affect its use. Actual information, such as an abstract, as opposed to a title, is of more value and requires less effort to use on the part of the user.



Generalized Flow Chart for SDI Operations

Section II  
DESCRIPTION OF SDI SERVICE AT AID/NAL

CALS Service

The primary SDI service available to USDA affiliated personnel is known as CALS (Current Awareness Literature Service). Databases used include AGRICOLA; Biological Abstracts/Bio Research Index; Chemical Abstracts; the files of the Commonwealth Agricultural Bureaux (UK); Engineering Index; Food Service and Technology Abstracts; National Technical Information Service; and World Textile Abstracts. The service is free and users are also supplied with free photocopies of the articles that they wish to read.

CALS was designed and funded for USDA-affiliated scientists and researchers. However, in the early 1970's the National Agricultural Library, which administers the CALS program, began to receive requests for the service from non-USDA-affiliated sources. These requests could not be filled under the CALS mission. In 1978, Ms. Lida Allen, the Director of ADI/DS/DIU established the ADI-UPDATE program in conjunction with National Agricultural Library, in order to provide a similar service to the international community, and less developed countries in particular.

AID-UPDATE Services

AID-UPDATE was initiated in November, 1979 primarily to provide overseas AID or AID-funded personnel and in some cases local scientists, Peace Corps workers, and institutions approved by AID Missions with:

- o Computerized current awareness literature searches (SDI's).
- o Retrospective computerized and other literature searches.
- o Documents, including books and journal articles, as cited in literature searches mailed to the clientele.
- o Similar document and agricultural information of any kind as requested by the clientele.

To fulfill its function, AID-UPDATE offers four basic services: AID-PROFILE (a profile writing service), AID-SDI (computer printed SDI searches), AID-COPY (a photocopy document delivery service), and AID-PEST (a pesticide reference service). Currently, the clientele of AID-UPDATE includes:

- (1) USAID personnel in the Washington area.
- (2) USAID personnel at overseas MISSIONS.
- (3) AID-assisted projects, organizations, scientists and other agriculturalists, all assisted only with the approval of AID Washington or mission officers.
- (4) NAL clientele from AID-assisted countries or organizations.
- (5) 15 international centers such as the International Institute for Tropical Agriculture.

In addition to the SII-oriented services of AID-PROFILE, AID-SDI, and AID-COPY, AID-UPDATE provides the AID-PEST service to provide information on the regulatory status, use patterns, tolerances, acceptable daily intakes, environmental and toxicological characteristics of pesticides useful to specialists in making recommendations for pest control procedures in Third World. An additional service that AID-PEST is providing is the development of a standard packet of microfiched documents on the regulation and use of pesticides for distribution to interested AID-UPDATE users. The packet will contain such documents as Acceptable Common Names for Pesticides, and records of the Environmental Protection Agency's RPAR (Rebuttable Presumptions Against Registration) process. An example of the potential institutional use of the AID-UPDATE service is shown in the Postharvest Documentation Service of Kansas State University use of CALS searches provided through AID-UPDATE as an acquisitions tool for developing their document collection.

The first year of the AID-UPDATE program was developmental; during this time, procedures were established, the first users were profiled, and searches began in March 1980. The second year of the program began in November, 1980. This pilot operation year ended in November, 1981, at which time AID-UPDATE was serving 209 clients with 623 profiles. Most of these clients are located in Africa. About 75% of AID update clients are overseas, and 25% based in Washington, D.C. The principal subject areas in which searches are conducted include plant, animal and soil science, entomology, agricultural economics,

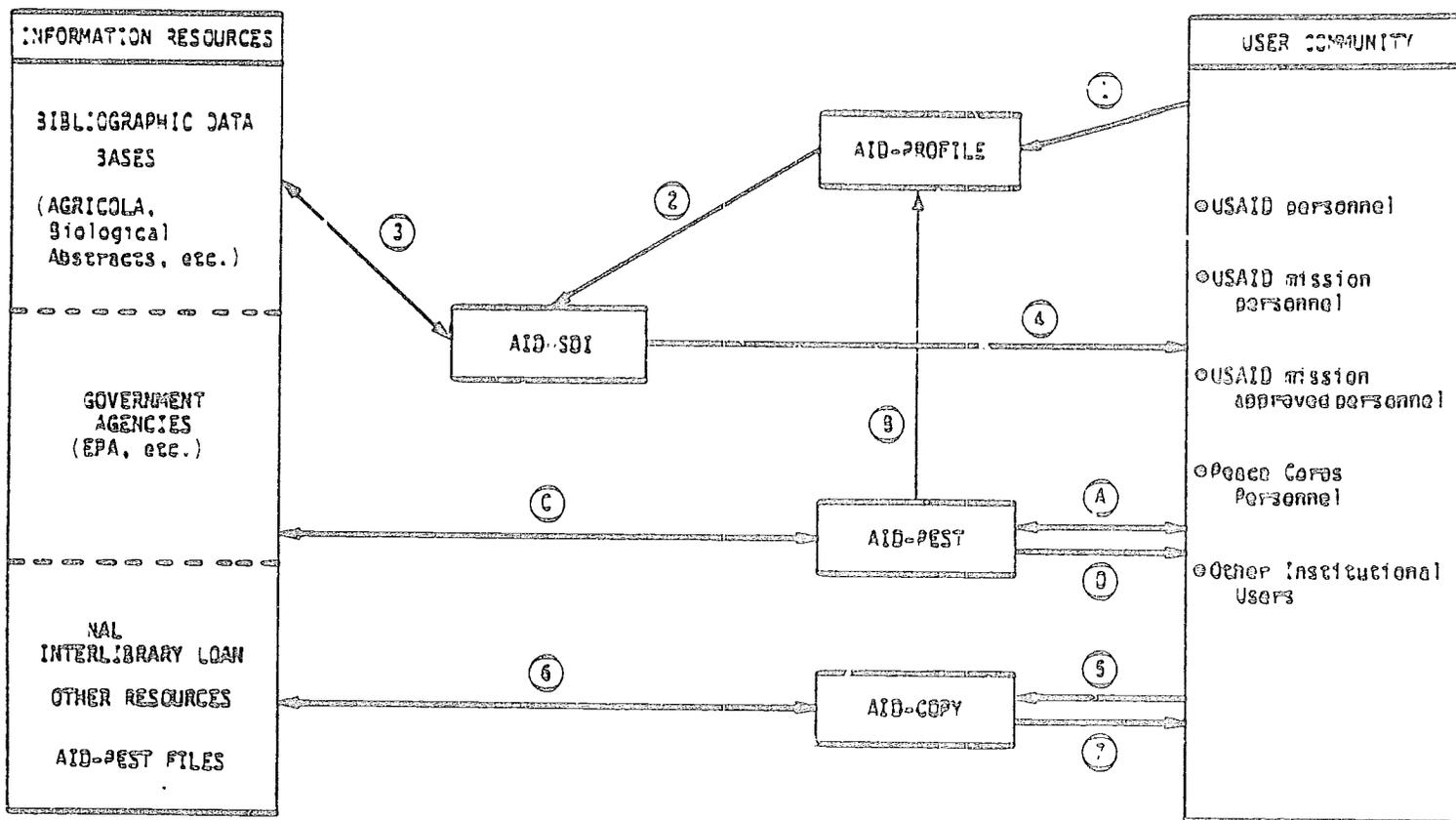
rural development and tropical agriculture. Among the most popular specific topics of computerized searches are:

- o Appropriate technology
- o Neem trees
- o Agricultural research management
- o Biocontrol
- o Biomass
- o Arid-land farming
- o Farming systems
- o Pesticides

An example of an SDI search and the form used to request documents are included in Appendix A. The information transfer process using AID-UPDATE services is illustrated in Figure 2.

AID-UPDATE service differs from the CALS service in two important respects. First, AID-UPDATE writes the profile for the user, while CALS users write their own based on the User's Guide for that system. Second, AID-UPDATE SDI searches can draw on over 200 databases, while CALS is limited to the databases mentioned earlier in this section. The photocopy service for both programs is similar, and both use the resources of NAL's Lending Branch.

TRANSFER OF INFORMATION  
THROUGH AID-UPDATE  
SERVICES



**Key:**

Circled numbers show the steps in the transfer of information through AID-PROFILE, AID-SDI, and AID-COPY.

- ①. User communities information need to AID-PROFILE writing service.
- ②. AID-SDI stores user profiles.
- ③. Profiles are matched against data bases.
- ④. SDI searches are mailed to users.
- ⑤. User requests document through AID-COPY.
- ⑥. AID-COPY obtains document.
- ⑦. AID-COPY provides document to user.

Circled letters show the steps in the transfer of information through AID-PEST.

- A. Information request comes to AID-PEST from user.
- B. Requests to be handled by a literature search enter the AID-SDI route.
- C. Requests for other information are researched directly in available resources.
- D. Information is provided to user.

Figure 2

Section III  
AID-UPDATE OPERATIONS

AID-UPDATE operates from room 302 in the National Agriculture Library in Beltsville, Maryland. Service is provided by the following combination of full and part-time employees:

- o Harry Dewey - NAL-AID Liaison Officer, provides project design and direction, profile writing, database searching, quality control, and administrative functions. 40 hrs./wk.
- o Faye Adams - provides research and development functions for AID-PEST, and executive assistance for Mr. Dewey. 40 hrs./wk.
- o Mary Ann Curtin - provides typing and maintainance of correspondence. 20 hrs./wk.
- o Sheila Dickerson - provides filing, photocopying, document retrieval, and other clerical functions. 40 hrs./wk.
- o J.C. Wong - provides document retrieval and photocopying. 15 hrs./wk.
- o Paul Chuang - provides clerical support. 15 hrs./wk.
- o Bernard Braun - provides NAL call number verification. 4-6 hrs./wk.

The use of the service and its expenditures for the pilot year are shown in the following tables.

AID-UPDATE Use Statistics

<u>Yr</u>	<u>Users</u>	CALs				<u>Yr</u>	Retropective <u>Searches</u>
		<u>Literature</u> <u>Searches</u>	<u>Photocopy</u> <u>Requests</u>	<u>SDI's</u> <u>Mailed</u>	<u>SDI</u> <u>Profiles</u>		
80	68	405	611	1,417	405	80	351*
81	209	732	4,175	7,476	623	81	129

\* Includes 300 searches for NAL provided in exchange for training AID-UPDATE personnel in CALs profile writing.

AID-UPDATE Expenditures, Pilot Operations Year

A.	Salaries, Liaison Officer (Dewey)	\$ 39,957.00
B.	Salaries, AID-PEST (Adams)	5,793.15
C.	Part-time Assistance	7,356.52
D.	Computer Services (BRS)	10,372.69
E.	Computer Services (CALs)	10,320.00
F.	Computer Services (Lockheed)	3,062.22
G.	Terminal Rental	2,081.65
H.	Office Supplies & Misc. Photocopying	426.34
I.	Local Travel	30.50
J.	Photocopying	4,516.94
		<hr/>
	TOTAL	\$ 83,917.01

These tables show a significant increase from the development year to the pilot year. Factors that affected use during the development year include that most of the project effort was primarily directed at designing and implementing the system and that the CALS service was unavailable for a large period of time when the USDA computer was malfunctioning.

Section IV  
MANAGEMENT RECOMMENDATIONS

The recommendations in this section are the result of examining available documentation of the AID-UPDATE project in the form of monthly reports and memos, and of interviewing Harry Dewey regarding the operation of the program. These monthly reports are presented in summary form in APPENDIX B.

Improving Service to Users

The primary method of determining user satisfaction in many SDI services is a user feedback form, included with the SDI searches. AID-UPDATE lacks such a mechanism for receiving user feedback, and individual service could improve through this type of response. An example of a user feedback form used by the National Institute of Health is provided here.

**INSTRUCTIONS** - Please answer questions 1, 2, and 3 for each category received. Retain this form in the enclosed envelope.

**1. To what extent do you agree to read? (Check one)**

Of considerable interest  
 Of moderate interest  
 Of little or slight interest  
 Of no apparent interest

---

**Comments**

---

**2. To what extent do you agree to your country's relations? (Check one)**

Very close relations  
 Slightly less than close relations  
 Slight or indifferent relations  
 No apparent relations

---

**Comments**

---

**3. How useful is this article to you? (Check one)**

Very useful  
 Slightly less than useful  
 Little or slight use  
 No apparent use

---

**Comments**

---

**ANSWER QUESTIONS 4, 5, AND 6 ONLY IF APPLICABLE TO YOU.**

**4. Did you have other information before it was published? (Check yes or no)**

	Yes/No
<b>Comments</b>	

---

**5. Were you already aware of this article? (Check yes or no)**

	Yes/No
<b>Comments</b>	

---

**6. Will you (or did you already)**

(1) **order this issue or to file or reference? (Check yes or no)**

	Yes/No
--	--------

---

(2) **order a reprint or make a copy of this article? (Check yes or no)**

	Yes/No
--	--------

---

(3) **contact the writer for details on price in the country? (Check yes or no)**

	Yes/No
--	--------

---

**YOUR COMMENTS will be of significant help in evaluating this project. Please write any such comments on the other side.**

**RESPONSES OF READERS, SUBSCRIBERS AND SUPPLIERS WILL BE HELD IN STRICTLY CONFIDENTIALITY**

**SELECTIVE DISSEMINATION OF INFORMATION**

**EVALUATION RECORD**

Additionally, examination of user satisfaction as a whole, through a questionnaire or sample group interview, could reveal systematic elements that could be altered to improve service. Useful data, in this regard, would be the number of requests not filled, the average response time for delivering an item, and the most often used sources of information.

Users of AID-SDI could benefit through the initiation of formal procedures to establish cost vs. performance in the use of the various resources on the project, CALS, BRS, Lockheed, and SDC. Although there is evidence that the relative benefits of each of these systems are recognized and exploited, quantification of factors such as average search cost, number of citations, and ease of use could provide a basis for improving service.

A forum for analyzing this type of quantitative record of service could be provided in a standardized monthly report. A primary benefit of standardized periodic reporting is that it provides an impetus for identifying problems and concerns, for evaluating alternatives, and for tracking the status and development of progress. Recommended items for inclusion in this report are:

- o Assessment of administrative concerns.
- o Description of major events during the reporting period.
- o A financial section detailing expenditures for the month.
- o A statistical section describing the volume of work completed. AID-UPDATE involves many clerical tasks. Statistical description of work completed on these tasks would be helpful for planning for seasonal or monthly variations in work load.
- o A description of problems encountered or anticipated, and proposed solutions.
- o A description of work planned for the next report period.

A final recommendation for improving service is to investigate the potential use of word processing equipment to lessen time required to create routinely used items such as mailing labels, letters, and numerous dynamic correspondence forms.

## Growth of the Service

Analysis of the operation of AID-UPDATE shows that procedures and mechanisms for promoting and providing the service are established and functioning. The design work has largely been completed, and increasing the use of the service would require primarily an increase in the availability of clerical support staff members and funds for computer time. Much work has been done in profile creation and a large resource file exists to support the quick development of new profiles that, in addition to development of time search strategies, is the primary consumer of professional time on the project. Documentation of AID-UPDATE policies, procedures, forms, and files could provide a mechanism that could relieve professional employees of clerical tasks.

The number of current SDI profiles (623) indicates that an analysis of these profiles would be necessary to increase efficiency and eliminate duplication if any significant growth in the number of users occurred.

Growth in the number of users can be expected to result in the increased use of AID-COPY. Currently, much clerical effort is required to retrieve documents and photocopy items. Significant growth could be expected to tax the current AID-UPDATE staff. In addition to increasing clerical support staff members, another idea for reducing the work load associated with AID-COPY is to use AID mission libraries to coordinate requests to AID-COPY wherever possible. This would eliminate some duplication of effort.

Increased use of AID-PEST would probably require additional staff members since, like any reference service, this project is very labor intensive.

## Summary

Increasing the use of AID-UPDATE significantly will result primarily in increased use of the literature searching, SDI, and AID-COPY services. Because of the previous effort required to serve current AID-SDI users, the input of growth would not be as strong on the professional staff as on the clerical staff. Estimates of staffing requirements for increased users could be extrapolated through analysis of production statistics. In addition to providing extra clerical staff, an increase in productivity of the staff can be accomplished through documentation of policies and procedures, increased coordination with groups of users, and application of appropriate office automation.

APPENDIX A

THIS SPECIAL BIBLIOGRAPHY HAS BEEN PREPARED FOR:

540013-001 SUTSWAINA  
 DR. VICTOR AMANN  
 PRODUCTION OF KARAKUL SHEEP  
 SEARCH IN THE AGRICOLA DATABASE  
 1972-1981  
 BY HARRY DEWEY

DATE: 01/05/82

BEST AVAILABLE DOCUMENT

*****	*****	*****
*	*	*
*	*	*
*****	*****	*****
*	*	*
*	*	*
*****	*	*****

BIBLIOGRAPHIC RETRIEVAL SERVICES, INC.  
 CORPORATION PARK, PLUG. 702  
 ELCTIA, NEW YORK . 12302

1 KARAKUL  
 RESULT 205

2 I. TI, TR, D.  
 RESULT 284

3 2 AND L100  
 RESULT 19

MICROFILMED FROM BEST  
 AVAILABLE COPY

\*\*\*\*\*  
 AN 81040775.  
 AU LY: MNK, V.S.  
 TR NEW TECHNOLOGY OF KARAKUL SHEEP MAINTENANCE ON THE KARNAR STATE  
 BREEDING FARM, JAMARKAND REGION, UZBEK SSR, INCLUDES COSTS AND  
 RETURNS.  
 SO DVTSEVOI STV. MOSKVA, "KOLOS". OCT 1980. (10). P. 22-23.  
 CN 45.0 LV72..  
 SN OTH.  
 YR 80..  
 LG RU.  
 PT A.  
 CC L100 L200.  
 DE USSR.

\*\*\*\*\*  
 AN 81040768.  
 AU POPOV, G.I.  
 TR UNITY OF SCIENCE AND PRACTICE, A GUARANTEE OF SUCCESSFUL DEVELOPMENT  
 OF KARAKUL SHEEP FARMING USSR.  
 SO DVTSEVOI STV. MOSKVA, "KOLOS". OCT 1980. (10). P. 6-7.  
 CN 45.0 LV72..  
 SN OTH.  
 YR 80..  
 LG RU.  
 PT A.  
 CC L100.  
 DE USSR.

\*\*\*\*\*  
 AN 81040767.  
 AU CHALBASH, R.M. SHAMSUTDINOV, Z.SH.  
 TR FIFTIETH ANNIVERSARY OF THE SCIENTIFIC CENTER OF KARAKUL SHEEP  
 HUSBANDRY ALL-UNION SCIENTIFIC-RESEARCH INSTITUTE OF KARAKUL SHEEP  
 HUSBANDRY.  
 SO PROF. OSVOENIYA PUSTYN PROB DESERT DLV. ASHKHALAD, "YLYM". 1980.  
 (6). P. 30-34.  
 CN QK438. I4P7..  
 SN OTH.  
 YR 80..  
 LG RU.  
 PT A.  
 CC L100.  
 DE USSR.

00602

PAGE 1

CAIN

AN 8108001.  
AU ANATOLIYEV, A. KURBANOV, E.  
TR KARAKUL SHEEP FARMING IN THE TURKMEN SSR.  
SU DVTSEVLUSTVO. MOSKVA, "KOLEG". AUG 1980. (8). P. 17-18.  
CN 45.0 1V72..  
SN OTH.  
YR 80..  
LG RU.  
PT A.  
CC L100.

AN 8108042.  
AU IUSUPOV, S.I.G. A. ZHANOV, A.  
TR INFLUENCE OF THE MILK SECRETION OF EWES ON THE GROWTH AND WOOL  
YIELDING CAPACITY OF KARAKUL LAMBS NUTRITION, WEIGHT GAIN.  
SU DVTSEVLUSTVO. MOSKVA, "KOLEG". MAY 1980. (2). P. 20-21.  
CN 45.0 1V72..  
SN OTH.  
YR 80..  
LG RU.  
PT A.  
CC L500 1100.

AN 80748299.  
AU VALIEV, USMAN VALIEVICH.  
TI KARAKULEVOSTVO AFGANISTANA.  
TR ASTRAKHAN SHEEP HUSBANDRY IN AFGHANISTAN.  
SU MOSKVA: "KOLEG", 1980. 73 P. 4 LEAVES OF COL. PLATES: ILL.  
CN SF373. X3V3..  
SN OTH.  
YR 80..  
LG RU.  
NT STL'OVAN' KHULIAISTVO ZA KUBEZICOM.  
PT N.  
CC L100.  
DE KARAKUL SHEEP. SHEEP BREEDS AFGHANISTAN.

AN 81010350.  
AU KUSALIMOV, A.K.  
TR ACHIEVEMENTS AND PROSPECTS OF KARAKUL SHEEP FARMING IN THE KAZAKH  
SSR.  
SU DVTSEVLUSTVO. MOSKVA, "KOLEG". JAN 1980. (1). P. 12-15. ILL.  
CN 45.0 1V72..  
SN OTH.  
YR 80..  
LG RU.  
PT A.  
CC L100.  
DE UCLN.

MICROFILMED FROM BEST  
AVAILABLE COPY

7  
AN BOGOLUBOV, I.  
AU BOGOLUBOV, I.O. UZBEK, U.S.S.R.  
TR UNDULOV RESERVE FOR INCREASING THE PROFITABLENESS OF KARAKUL SHEEP  
FARMING MILK PRODUCTION, USSR.  
SO UZBEKOVOSTROY. MOSKVA, "KOLLEK". OCT 1979. (10). P. 19-20.  
CN 45. 11472.  
SN DTH.  
YR 71..  
LG RU..  
PT A.  
CC L10..  
DE USSR.

\*\*\*\*\*  
AN BOGOLUBOV, I.  
AU NIJALOV, K.H.  
TR FACTORS EXPLOITING INCREASED EFFECTIVENESS OF KARAKUL SHEEP  
PRODUCTION.  
SU ZHIVOTNORODSTVO. MOSKVA, "KOLLEK". APR 1979. (4). P. 22-23.  
CN 6.  
SN DTH.  
YR 79..  
LG RU..  
PT A.  
CC L10..

\*\*\*\*\*  
AN BOGOLUBOV, I.  
AU TILLALOV, A.A.  
TR ALONG THE ROAD TO SPECIALIZATION KARAKUL SHEEP PRODUCTION, SAMARKAND  
REGION, UZBEK SSR.  
SO ZHIVOTNORODSTVO. MOSKVA, "KOLLEK". APR 1979. (4). P. 18-21. ILL.  
CN 6.  
SN DTH.  
YR 79..  
LG RU..  
PT A.  
CC L10..  
DE USSR.

\*\*\*\*\*  
AN BOGOLUBOV, I.  
AU NURMURADILLOV, F.N.  
TR LEADING BRANCH OF ANIMAL HUSBANDRY IN THE REPUBLIC KARAKUL SHEEP  
PRODUCTION, UZBEK SSR.  
SO ZHIVOTNORODSTVO. MOSKVA, "KOLLEK". APR 1979. (4). P. 16-17.  
CN 6.  
SN DTH.  
YR 79..  
LG RU..  
PT A.  
CC L10..  
DE USSR.

MICROFILMED FROM BEST  
AVAILABLE COPY

\*\*\*\*\*  
AN BOGOLUBOV, I.  
AU FAKHRIYEV, M.R.

20867

PAGE 3

CATN

TR EFFECT OF SPECIALIZATION KARAKUL SHEEP PRODUCTION, SAMARKAND REGION,  
UZBEK S.S.R.  
SO ZHIVOTNOVODSTVO. MOSKVA, "KOLETS". APR 1979. (4). P. 5-6. ILL.  
CN 6.  
SN OTH.  
YR 70..  
LG RU..  
PT A.  
CC L100.  
DE USSR.

\*\*\*\*\*

AN 80095814.  
AU KARKHIMOV, B.I.  
TR EFFECT OF SPECIALIZATION KARAKUL SHEEP PRODUCTION, SAMARKAND REGION,  
UZBEK S.S.R.  
SO ZHIVOTNOVODSTVO. MOSKVA, "KOLETS". APR 1979. (4). P. 5-6.  
CN 6.  
SN OTH.  
YR 79..  
LG RU..  
PT A.  
CC L100.  
DE USSR.

\*\*\*\*\*

AN 80096154.  
AU LYSSENKO, V.S.  
TR SPECIALIZATION IN KARAKUL SHEEP FARMING AND REQUIREMENTS IN LAMB  
JUDGING USSR.  
SO OVTSEVDSTVO. MOSKVA, "KOLETS". FEB 1979. (2). P. 10-19.  
CN 2.  
SN OTH.  
YR 79..  
LG RU..  
PT A.  
CC L100.  
DE USSR.

\*\*\*\*\*

AN 80096120.  
AU AMIROV, A.K.  
TR RESERVES FOR INCREASING THE MEAT AND TALLOW PRODUCTION OF KARAKUL AND  
FAT-RUMPED SHEEP USSR.  
SO OVTSEVDSTVO. MOSKVA, "KOLETS". MAR 1979. (3). P. 37-38.  
CN 2.  
SN OTH.  
YR 79..  
LG RU..  
PT A.  
CC L100.  
DE USSR.

MICROFILMED FROM BEST  
AVAILABLE COPY

\*\*\*\*\*

AN 80072655.  
AU ACHARYA, K.M. AMIN, M.  
TI NUTR. ON PRELIMINARY OBSERVATIONS ON THE PERFORMANCE OF DUPEBRED

60862

PAGE 4

CATN 1

KARAKUL SHEEP WITH CARPET WOOL PROBLEMS IN THE H.T. AND  
COLD A.M. AND WINTER CLIMATES.

SO 1974. J. AGRIC. SCI. CAMBRIDGE, BRITAN. COUNCIL OF AGRICULTURAL  
RES. COM. JAN 1974. V. 83 (1). P. 79-81. ILL.

CN 2.  
SN OTH.  
YR 80..  
LG 57..  
NT 1 3/4-  
PT A.  
CC L100.

AN 80035040.

AU KOGAN, I.

TR EXPERIENCE WITH INT. REAM. COOPERATION IN KARAKUL SHEEP FARMING COSTS  
AND RETURNS, SAMARKAND REGION, UZBEK SSR.

SO EKON. SLEP. KHOL. MOSKVA, "KOLESS". FEB 1979. (2). P. 71-73. ILL.

CN 3.  
SN OTH.  
YR 79..  
LG RU..  
PT A.  
CC E200 L100.  
DE USSR.

AN 80038300.

AU LE KOUX, P.J.

TI BESTUUR EN PRODUKSIE BY DIE KARAKOEL.

TR MANAGEMENT AND PRODUCTION OF KARAKUL SHEEP.

SO JAARS KARAKUL BREEDERS SOC S AFR. WINDHOEK, THE SOCIETY. 1978.  
(20TH). P. 65-67, 69. ILL.

CN 4.  
SN OTH.  
YR 78..  
LG AF..  
PT A.  
CC L210 L100.

AN 80038302.

AU NEL, J.A.

TI DIE KARAKOELTIELTE DRYF IN PERSPEKTIEF.

TR KARAKUL SHEEP HUSBANDRY IN PERSPECTIVE.

SO JAARS KARAKUL BREEDERS SOC S AFR. WINDHOEK, THE SOCIETY. 1978.  
(20TH). P. 17, 19-21.

CN 4.  
SN OTH.  
YR 78..  
LG AF..  
PT A.  
CC E200 L100.  
DE SOUTH AFRICA.

MICROFILMED FROM BEST  
AVAILABLE COPY

80002

PAGE 5

CITATIONS 19

CAYN

Enclosed is a Current Awareness Literature Service (CALs) search requested by you or sent on a demonstration basis (see enclosed or earlier communication from this office to you). The search is from the latest tape issue of the data base named at the top of the 1st or 2nd page of the enclosure.

0006038 (1/80)

( ) INSTRUCTIONS: HOW TO ORDER PHOTOCOPIES OF DOCUMENTS

- (1) Read enclosed search and draw a circle around the documents you want us to copy. If a citation is continued onto a second page, be sure we receive BOTH pages.
- (2) Type, print, or stamp your user number, name and address in space B below.
- (3) Sign this page in the lower right corner at "C". Unsigned requests cannot be filled (under copyright law).
- (4) Mail this page and the search to:

AIDCOPY, Room 302  
National Agricultural Library  
Beltsville, Maryland 20705 USA

Make a photocopy of the search if you wish to keep it. It will be cut up and cannot be returned.

If you have any questions about our searching service or about the document ordering procedure, please phone me at 1-301-344-3704 or write me at the above address. Thank you.

*Harry Dewey*  
Harry Dewey, AID-AID Liaison Officer

AIDCOPY INTERNATIONAL LOAN REQUEST FORM. This page may be photoduplicated, filled in, and one copy submitted to AIDCOPY as a request for any publication (except AID publications) whether listed in the enclosed search or not. Keep one copy for yourself.

Do not write above this line; the upper half of this page will be photocopied.

NAL call number:

AIDCOPY  
INTERNATIONAL LOAN REQUEST FORM  
BULLETIN DE DEMANDE DE PRET INTERNATIONAL

AIDCOPY, Rm. 302, USDA-NAL, Beltsville, Md. 20705 USA

Do not write here. N'ecrivez pas ici.

No. of pages: Serial no.:  
Bill to: AIDCOPY Phone 301-344-3704 X23  
Room 302, USDA-NAL, Beltsville, Md. 20705

Photocopy required  
Comando de fotocopia  
 Microfilm required  
Comando de microfim

PLEASE SIGN THE FORM BELOW

Shipping (not billing) address:

B User no. 59 (from window envelope)

I declare that this publication is required only for the purpose of research or private study

VEUILLEZ SIGNER LE BULLETIN CI DESSOUS

Je declare que cette publication est utilisee pour des fins de recherches ou d'etude priv'es.

C Signature:

# (s c D r v3 a) / / 8 V

USER'S ADDRESS SPACE  
ADRESSE DE L'UTILISATEUR

A... (small text at bottom left)

REPRODUCED FROM BEST AVAILABLE COPY

Series/Serie

## APPENDIX E

Survey Sent to over 220  
Aid Agricultural Officers

Appendix

E.

February 9, 1982

Survey Letter  
for

Technical  
Inquiry Service

Mr. Kevin Allyn Rushing  
Agricultural Development Officer  
USAID/Panama City  
Agency for International Development  
Washington, D.C. 20523

Dear Mr. Rushing:

The Office of Development Information and Utilization (S&T/DIU) manages the USDA RSSA Project No. 0064, Agricultural and Related Services, better known to its users as the Technical Inquiry Service or the Pat Wetmore Operation. Under this agreement, the USDA provides information in response to questions from AID agriculturists and other priority clients.

On March 11, 1982 we will be conducting an in-depth evaluation of this project and the services it provides. We would like to obtain as much feedback as possible to help the evaluation team judge past performance and make recommendations about future directions for this activity.

We would like to know if you personally use the service or if you know of PASA or Contract staff, Peace Corps Volunteers, PVO staff, LDC counterparts or key development institutions who use the service. It will be as important for the team to know about non-users as users, particularly if you can give reasons why the service is not appropriate to your needs.

From users, we would appreciate an indication of how you heard about the service, how frequently you use the service, how useful the responses have been to you, and how important this service is compared to other support services you receive. How would a reduction of this service affect your programs?

Finally, we would appreciate any suggestions you might have for improving this service. We recognize that wide discrepancies in the use of the service exist within offices and missions. We hope to obtain professional opinions and views from as many AID agriculturists as possible to help us understand some of the reasons behind varying use. I can assure you that any comments you provide will be used by the team to develop recommendations to make this project responsive to field needs.

Thank you very much for taking the time to give us your thoughts about this project.

Sincerely,



Earle G. Lawrence  
Utilization Chief (Act.)  
Development Information & Utilization  
Science & Technology Bureau

UNITED STATES OF AMERICA  
AGENCY FOR INTERNATIONAL DEVELOPMENT

U.S. AID MISSION TO SWAZILAND  
P.O. BOX 790. MBADANE. SWAZILAND  
TEL. 42071. 42072. 42629 & G.S.O. 42073

MAR 29 1982

March 10, 1982

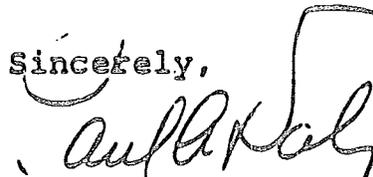
Mr. Earle G. Lawrence  
Acting Utilization Chief  
S&T/DIU, Rm 590, SA-14  
Development Information  
and Utilization  
Science and Technology Bureau  
Agency for International Development  
Washington, D.C. 20523

Dear Mr. Lawrence:

Please forgive the delay in responding to your inquiry concerning the use of the Technical Inquiry Service--yes, I am a user. I have made a great use of the service for a number of years. We did in fact rely on your Service in the development of the Niger Range and Livestock reference library. This library is, to my knowledge, one of the best equipped libraries in the Sahel specifically on Sahelian literature. We used the Service for backstopping the project technicians and to secure many of the publications and related literature. Your Service was used by the total contract team of fifteen technicians in four different disciplines, i.e. range science, animal husbandry, anthropology and economics. Through your Service we were put onto the backstopping capabilities of the Riverside California library (MUSAT) for more technical writings on the Sahel.

Trusting all goes well, and I look forward to your continued service.

Sincerely,



Paul A. Daly  
Agricultural Development Officer

AGENCY FOR INTERNATIONAL DEVELOPMENT

UNITED STATES OF AMERICA AID MISSION TO HONDURAS

AMERICAN EMBASSY  
TEGUCIGALPA, HONDURAS

APR 05 1982

APR 25 1982

Mr. Earle G. Lawrence  
Utilization Chief (Act.)  
Development Information  
& Utilization  
Science and Technology Bureau

Dear Mr. Lawrence:

I regret the delay in answering your February 9 letter. We have been abnormally busy here of late.

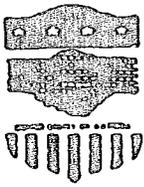
The USAID/H Office of Agriculture has not made extensive use of the Technical Inquiry Service, but we have served as a channel for numerous requests by the Honduran Central Bank and by the Panamerican Agricultural School at El Zamorano, Honduras. Both of these entities have been very appreciative of the thoroughness of Ms. Wetmore's Operations.

The staff of the USAID/Bolivia Rural Development Office, where I was assigned previously, made very extensive use of these services. Ms. Wetmore visited that country some time ago and explained the nature of the service to the AID staff and host government personnel. It might be useful to schedule such a trip again in order to renew knowledge of the service among the continually changing personnel, again both for AID and the host government. I would conclude that limited knowledge of the existence of the service is the main reason it is not used more extensively.

Sincerely yours,



Stephen C. Wingert  
Office Director  
Food and Agricultural Development



UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT  
MISSION TO PAKISTAN

Case: USAIDPAK

HEADQUARTERS OFFICE  
ISLAMABAD

MAR 19 1982

March 8, 1982

Mr. Earle G. Lawrence  
Room 509 SA-14  
Utilization Division Chief (Acting)  
Development Information & Utilization  
Science & Technology Bureau (S&T/DIU)  
U.S. International Development Cooperation  
Agency  
Agency for International Development  
Washington D.C. 20523  
USA

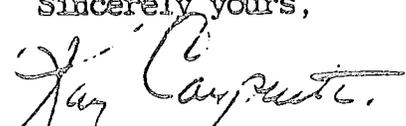
Dear Mr. Lawrence:

With respect to the Pat Wetmore Operation, I can only offer the highest praise. I have been associated with Pat Wetmore for at least ten years, dating back to when I was in Viet Nam. At that time it may not have been called a technical inquiry service. Nevertheless, Wetmore was very cooperative in furnishing us with technical reports, etc., either from the OICD Library or from the USDA National Library. This very fine service continued through three years in Liberia and another two years in Sudan. In Pakistan we have taken advantage of the Pat Wetmore Operation to a great extent, providing technical material, either directly to the Government of Pakistan requesters or making copies of single documents received, for distribution to PARC and the provinces. Curtailment of this service would seriously affect the volume of technical material that we pass on to the Government of Pakistan.

In my twenty years of overseas service, the provision of technical documents has been one of the easier ways of communicating modern technology. However, I feel that where Missions don't take advantage of the Pat Wetmore type operation, it is either because they are not familiar with it or focus is directed to contractor activities wherein the contractors provide and communicate technology directly or use other sources. With AID's new thrust

on technology transfer, it may be worthwhile for the RSSA to prepare some type of flyer that could be distributed to the Missions.

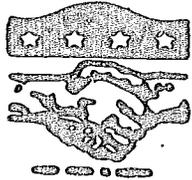
Sincerely yours,



J. Raymond Carpenter  
Acting Chief  
Office of Agriculture &  
Rural Development

UNITED STATES OF AMERICA  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
MISSION TO GHANA

17



MAR 17 1982

Ring Road East Near Danquah Circle  
P. O. Box 1630  
ACCRA - GHANA  
TELEPHONE 73346

March 4, 1982



Mr. Earle G. Lawrence  
Utilization Chief (Act)  
Development Information & Utilization  
Science & Technology Bureau  
Agency for International Development  
Washington, D.C. 20523

Dear Mr. Lawrence:

I refer to your letter of February 4, 1982 regarding the evaluation of the Technical Inquiry Service Project. The Food and Agriculture Office of USAID/Ghana has used the Technical Inquiry Services extensively. We have requested information for the U.S. Peace Corps, Japan Overseas Volunteer Corps, and other private voluntary organizations.

Host country users include the Ministry of Agriculture, its Extension and Home Demonstration Services, and the Food Research Institute. In addition many individual farmers, rural entrepreneurs, craft and tradesmen have requested information.

The response received by the USAID/Ghana Food and Agriculture Office have been very useful and timely. Most requests received are of a general nature.

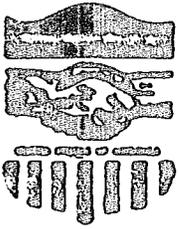
Knowledge of the availability of the Technical Inquiry Service for use among the Mission's Agriculture staff has developed through informal contacts with other AID Agriculturalists, and literature distributed by S&T/DIV. One member of my staff learned of the service as an IDI during his AID/W training.

The services offered by this Project are an important contribution to our program in Ghana, and have helped to keep my staff and I informed of the up-to-date and relevant topics in agriculture and rural development. I hope this month's evaluation will be favorable and recommend the continuation of this service.

Sincerely yours,

*Stephen A. Szadek*

Stephen A. Szadek  
Agriculture Development Officer



UNITED STATES OF AMERICA  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
MISSION TO NEPAL

(18)

KATHMANDU, NEPAL

March 3, 1982

Earle G. Lawrence  
Utilization Chief (Act.)  
Development Information & Utilization  
Science & Technology Bureau  
Agency for International Development  
Washington, D. C. 20523

MAR 17 1982

Dear Mr. Lawrence:

This is in reply to your letters of February 4 concerning evaluation of the Agriculture and Related Services Project (the Pat Wetmore Operation).

I personally use the service about once a month. I heard about the service from other AID project officers. The service has been extremely useful to me. Responses are timely and reliable.

This has easily been the most useful information support service which I have used. I would regret a reduction in the service. When stationed in Kathmandu or La Paz or elsewhere, it is very difficult to obtain specific technical information. The "Pat Wetmore Operation" has very effectively met this need.

I do not personally know of other direct users apart from AID project officers. I frequently obtain information through the service for PVO staff, volunteers, and contract personnel.

I should use the service more and in support of more people - contractors, host government personnel, etc. It would facilitate use of the service if AID agriculture offices received a supply of one page circulars explaining the service to give to contract personnel, PVO's, LDC counterparts, etc. This would also be useful to acquaint other AID users with the service.

Sincerely,

  
Gary Alex  
Project Officer

AGENCY FOR INTERNATIONAL DEVELOPMENT  
MISSION TO NEPAL

## APPENDIX 6

Survey Sent to over  
200 UPDATE USERS

UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON DC 20523

February 10, 1982

Appendix  
G  
Survey Letter  
for  
AID UPDATE

Mr. Colin A. Borton, Post Harvest Scientist  
WINBAN Research & Dev. Division Library  
PO Box 115  
Castries, St. Lucia

Dear Mr. Borton:

The Office of Development Information and Utilization (S&T/DIU) manages a project with the U.S. Department of Agriculture which provides the AID UPDATE service. Harry Dewey, manager of that activity, listed you as a user of that service.

On March 11, 1982 we will be conducting an in-depth evaluation of this project and the AID UPDATE service. To make the best possible judgements about past performance and to develop recommendations for the future of AID UPDATE, the evaluation team would like to obtain as much feedback from users as possible.

We would like to know how you become aware of the service and if you use it personally or subscribe to the service on behalf of individual or institutional counterparts, contractors or other AID clients. It will be valuable for the team to know if you are not using the service, particularly if you can give reasons why the service is not appropriate to your current needs.

From active users, we would like to know if you obtain articles from other sources or rely on AID-COPY. How often do you request material? We would appreciate a list of specific agricultural areas for which you requested AID UPDATE and an indication of how timely and useful you have found the response.

The Evaluation team will pay close attention to any advantages or disadvantages you can cite or any suggestions you might have about the service.

Thank you very much for taking the time to respond to these questions.

Sincerely,



Earle G. Lawrence, Room 509 SA-14  
Utilization Div. Chief (Act.)  
Development Information & Utilization  
Science & Technology Bureau (S&T/DIU)

// AIR MAIL //

Guneid - Sudan  
21st. March, 82

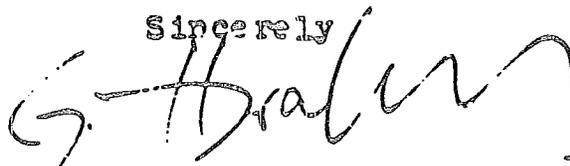
Mr. Earle G. Lawrence  
 Room 509 SA - 14  
 Utilization Div. Chief (Act.)  
 Development Information & Utilization  
 Science & Technology Bureau (S&T/DIU)  
 ----

APR 5 1982

I am sorry for the inevitable delay in replying your letter of February 10, 1982. The reason being my absence from base.

I become aware of CALS through Dr. Jane J. Riley of the USAID who is taking the job of Senior Advisor to the Director, Agricultural Research Division Sudan. I am personally using the service and often pass an article to a colleague whom I feel he may benefit from. I do obtain articles from periodicals either through the library of the Institute or personal subscription. I request material from CALS roughly at two weeks interval. I am particularly interested in literature pertaining to diseases of sugarcane. I have found the response to my request quite satisfactory.

Sincerely



I. Geafar

GI/R.F.

Agric. Research Corp. Guneid Res. Station  
 P.O. Box of  
Guneid - Sudan.

APR 19 1982

U.S. AID  
Khartoum, Sudan  
April 1, 1982

Mr. Earle G. Lawrence  
Room 509 SA 11  
Development Information and Utilization  
Science and Technology Bureau  
U.S. Agency for International Development  
Washington, D. C.

Dear Mr. Lawrence:

My apologies for our delay in responding to your letter of February 10. Your letter did not reach here until mid-March, and since the nascent AID library was borrowed for temporary office space for a new economist, I did not go in and find the mail.

We do use the AID Update service in Sudan. Members of the AID staff deal directly with Mr. Deway for reprints they need just as the individual sections frequently order materials they need for reference as they see them listed in the variety of bibliographic sources which arrive here.

I get involved less frequently for helping AID contractors or Sudanese counterpart personnel obtain reports. These have primarily been veterinarians or plant pathologists or fisheries personnel. Occasionally too we obtain reports published here, that are requested by Mr. Deway for Washington personnel. There have been about three of those requests since last September, all filled; and I would judge requests for information go out once or twice a month from those people I assist. The number going out from the office staff I do not know.

Mr. Deway has been very helpful - punctual with print outs each month, and quick to respond to any request.

Sincerely,

  
Mary C. Mudge



EMBASSY OF THE  
UNITED STATES OF AMERICA

APR 13 1982

USAID/SENEGAL  
Department of State  
Washington, D.C. 20520

March 29, 1982

Mr. E.G. Lawrence  
Room 509 SA-14  
Utilization Div. Chief (Act.)  
Development Information and Utilization  
Science and Technology Bureau (S and F Div)

Dear Mr. Lawrence,

I apologize for this late response to your letter concerning the evaluation of the AID UPDATE Service.

Hoping that it is not yet too late to put in a good word about Mr. Dewey's efforts at AID UPDATE, I will begin by stating that I've been in Africa now for over five years working as an entomologist. One of the first difficulties I noted professionally was the fact that I was effectively cut-off from current professional literature. My first three years in the Peace Corps did not allow me pouch privileges and I hadn't the money for the purchase of journals. Even if I had the money, one can only subscribe to a limited number of professional journals. So in the course of my orientation with USDA/AID I had a chance to plug into AID UPDATE I was especially pleased. AID UPDATE is like having the Nation Agricultural Library in your office in-box. Without reservation, I have found AID copy of great professional benefit. In the seven months I have been received over 50 photocopied articles chosen from the computer citations. My areas of interest have been the following:

- 1) Buffalo Gourd: A new tuber crop that we will be testing this year as a possible replacement for Cassava. Cassava currently has serious problems with insects and disease.
- 2) Millet and Sorghum biology: Two very important subsistence level crops.
- 3) Attriplex: a plant genus that shows promise for growing in saline saturated soils.
- 4) Specific insect problems.
- 5) Cassava production
- 6) Loss Assessment statistics: A very important area of study currently in third World agriculture.

I will conclude by expressing my hopes that AID UPDATE will continue to receive the support necessary to continue its operation.

Sincerely,

William H. Settle  
Country Project Officer  
RFCP/USAID/DAKAR

UNITED STATES OF AMERICA  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
RABAT, MOROCCO

MAR 25 1982

United States Address :  
Rabat (IO)  
Department of State  
Washington, D.C. 20520

العنوان المحلي :  
137 ، شارع علال بن عبد الله  
صندوق البريد 120  
الرباط - المغرب  
الهاتف : 303\_61

Adresse locale :  
137, Avenue Allal Ben Abdallah  
B.P. 120  
Rabat, Maroc  
Téléphone : 303-61

Earle G. Lawrence

DI/U  
S & T Bureau  
Room 509 SA-14  
Agency for International Development  
Washington DC 20523.

Dear Sir :

This letter responds to your requests to myself and Mr. W. Erdahl, Program Officer, about the evaluation of the AID UPDATE activity with Harry Dewey, of USDA/NAL.

We became aware of this service when a print-out and order form were sent to me. I recognized Harry Dewey's name and what he does at NAL, as I utilized one of the computer searches when I did my M.S. Thesis research there. Mr. Erdahl became aware of it because I sent my request through him, as I did not know our user number.

We utilize the AID INFO service solely to provide current research and development results to our contractors on the AID range management project, who like to hear about recent data, such as forage and range grass varieties, adaptation trials, range treatments, etc, in semi-arid areas. Our intent is to offer the same service to our new contractors working with the Dryland Agriculture Applied Research project.

I find the service very useful and recommend that it be continued.

Sincerely yours,  
  
Jonathan Sleeper.

25

# THE ASIAN VEGETABLE RESEARCH AND DEVELOPMENT CENTER

CABLE ADDRESS:  
ASVEG SHANHUA

P. O. BOX 42, SHANHUA, TAINAN, 741,  
TAIWAN, REPUBLIC OF CHINA

TELEPHONE:  
064-037131

MAR 9 1982

March 1, 1982

Mr. Earle G. Lawrence  
Utilization Div. Chief (Act.)  
Rm 509 SA-14, S&T/DIU  
U.S. Agency of International Development  
Washington, D.C. 20523  
U.S.A.

Dear Mr. Lawrence,

Thank you very much for your letter of February 10, 1982. I hope this letter will reach you on time to meet the in-depth evaluation.

I would reply as follow:

1. UPDATE Service

I learned for the first time from Mrs. Allen, The Director of DIU/AID, when she visited us in 1979. In 1980, at the 6th IAALD Conference in Manila, I expressed our need of SDI service to Mr. Olsen, the Chief of Library Operation Div/NAL, who represented AID/USDA/NAL to discuss the "AID COPY" with International Agricultural Research Centers' Librarians. On February 15, 1981, we started to receive UPDATE service.

In 1981, our library received 685 requests for documents. 300 of them, please note almost half of total requests, were the results of UPDATE service.

2. AID COPY Service

In 1981, we requested 24 AIDCOPY, We obtained 23 items within 60 days. Only one item took six months, and we failed to received it. Specially for this item, I would like to extend my heartfelt thanks to all of AIDCOPY staff for their enthusiasm to try to locate it for us. It is an article on Chinese cabbage from mainland China.

I am enclosing a list to show the subject areas for which we requested UPDATE service, the number of citations requested by AVRDC research staff, and the number of AIDCOPY we request.

.../1

# THE ASIAN VEGETABLE RESEARCH AND DEVELOPMENT CENTER

CABLE ADDRESS:  
ASVEG SHANHUA

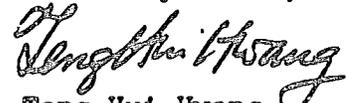
P. O. BOX 42, SHANHUA, TAINAN, 741,  
TAIWAN, REPUBLIC OF CHINA

TELEPHONE:  
064-837131

March 1, 1982

Finally, I would like to say that UPDATE provided the most of information needed by our research staff and AIDCOPY provided us those difficult to obtain items. I hope we may continue to receive UPDATE and AIDCOPY.

Sincerely Yours,



Teng Hui Hwang  
Librarian

THH/GL

# THE ASIAN VEGETABLE RESEARCH AND DEVELOPMENT CENTER

CABLE ADDRESS:  
ASVEG SHANHUA

P. O. BOX 42, SHANHUA, TAINAN, 741,  
TAIWAN, REPUBLIC OF CHINA

TELEPHONE:  
064-837131

User number	Subject area	No of citations requested by AVRDC scientists	AIDCOPY requested by AVRDC library
598101-01 <sup>a</sup>	Mungbean	57	4
598101-02	Tomato	50	2
598101-03	Chinese cabbage	3	11
598101-04	Sweet potato	15	1
598101-05	Soybean	95	4
598101-06	Cabbage	3	
598101-07	tropical fruits vegetables	5	
598101-08	root and tuber crops for tropics	11	1
598101-09	root-knot nematode	14	1
598101-10	aquatic weed control	(cancel).	
598101-11	leafy vegetables	5	
598101-12	fruited vegetables production	4	
598101-14	appropriate technology	4	
598101-15	intergrated pest management	3	
598102-01 <sup>b</sup>	Taro	10	
598103-01 <sup>c</sup>	agriculture, food and nutritional problems of Asia	17	
598105-01 <sup>d</sup>	plant resistant to diseases, control of nematode and fungus diseases	4	

a.) T.H. Hwang, Librarian

b.) Dr. I. Tanabe, Soil Scientist

c.) Dr. J. Gershon, Consulting Nutritionist (AID financed)

d.) Dr. A.T. Tschanz, Plant Pathologist (USDA financed)