

1. PROJECT TITLE Commercial Seed Industry Development PD-ANN-865 104-22452 93110/15	2. PROJECT NUMBER 931-1121	3. MISSION/AID/W OFFICE ST/RD/ESE
	4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with NC 1 each FY) <u>84-2</u> <u>1/23/84</u>	

KEY PROJECT IMPLEMENTATION DATES			6. ESTIMATED PROJECT FUNDING A. Total \$ 825,000 B. U.S. \$ 825,000	7. PERIOD COVERED BY EVALUATION From (month/yr.) <u>Start-up</u> To (month/yr.) <u>9/83</u> Date of Evaluation Review <u>1/84</u>	
A. First PRO-AG or Equivalent FY <u>80</u>	B. Final Obligation Expected FY <u>85</u>	C. Final Input Delivery FY <u>85</u>			

E. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., telegram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
1. Establish more regular liaison between the Commercial Seed Industry Development Project and the Mississippi State University seed project.	Action has been taken by ST/RD and ST/AG	
2. Revise the internship training program to better meet the needs of LDC senior seed industry officials.	ICD	Already completed
3. Establish criteria for prioritizing the increased number of requests for assistance.	C. Mock	May 1984
4. Expand the project scope to include a broader range of agribusiness activities.	C. Mock	May 1984
5. Develop a more effective strategy for promoting the project's services to USAIDs, LDCs and cooperating seed companies from developed countries.	C. Mock and ICD	May 1984

INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS <input checked="" type="checkbox"/> Project Paper <input checked="" type="checkbox"/> Implementation Plan & CPI Network <input checked="" type="checkbox"/> Other (Specify) <u>Grant Agreement</u> <input type="checkbox"/> Financial Plan <input type="checkbox"/> PIO/T <input type="checkbox"/> Logical Framework <input type="checkbox"/> PIO/C <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/> Project Agreement <input type="checkbox"/> PIO/P	10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT A. <input type="checkbox"/> Continue Project Without Change B. <input checked="" type="checkbox"/> Change Project Design and/or <input checked="" type="checkbox"/> Change Implementation Plan C. <input type="checkbox"/> Discontinue Project
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11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles) Michael Farbman, Chief Employment and Small Enterprise Division	12. Mission/AID/W Office Director Approval Signature _____ Typed Name <u>Jerome T. French</u> Date <u>1/23/84</u>
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PDAAN 865

COMMERCIAL SEED INDUSTRY DEVELOPMENT

Project Evaluation Summary Narrative

13. Summary

The Commercial Seed Industry Development Project, authorized in 1979, represented a new thrust for the S&T Bureau when it was created to promote development of the commercial aspects of seed industries in LDCs. The Industry Council for Development has been able to organize effectively the resources of seed companies and seed experts in developed countries by establishing a network of "senior associates" (on-call consultants) and other seed experts from seed companies as resources to the project. The time required to accomplish this, however, has been far greater than originally anticipated and this has hampered achievement of the important subsidiary project objective of matching resources with needs in LDCs.

Because of the uniqueness of the ICD approach - i.e., a commercial orientation which pre-dated AID's private sector initiative, the existence of another, albeit different type of AID seed project,* and a promotional effort which was not as vigorous as it could have been, USAID missions have been slow to request services under the project. Inventorying LDC needs, which required missions' assistance, was thus delayed. Funds have not been expended for field services at the level originally planned, especially in the training area. The problem of inadequate field requests, however, no longer exists and the ICD has recently received a large number of mission requests which should fully utilize its grant funds. The project completion date was extended by 2 years (without additional funding) to compensate for the slow start.

* Mississippi State University has, since 1955, implemented AID's centrally-funded "Seed Program and Seed Industry" project. While the services of this project are different from those provided by the Commercial Seed Industry Development Project - the former focuses on the technical aspects of seed production whereas the latter is concerned with institutional and management issues - there has been confusion by USAID missions between the two projects.

The ICD has also found it more difficult than originally anticipated to place LDC seed experts with seed companies in developed countries for internships. The ICD needs to increase its network of companies willing to participate in this component of the project.

When the project began, the ICD found that commercial seed industries were not established in LDCs, so the focus of the project shifted from direct assistance to indigenous commercial seed operations to government policy reform. This was a correct decision, and the ICD has played an important role in encouraging LDC governments to revise their policies so that commercially oriented seed operations can be developed.

Finally, the ICD has been highly successful in providing quality services to field missions and in gaining the respect of both LDC and developed country seed industry experts.

14. Evaluation Methodology

This was a midterm evaluation, designed to qualitatively measure the progress of the ICD seed project to date. At S&T/RD's request, the evaluation goes beyond the scope outlined in the project paper in that an assessment has been made of extending project services to all types of agribusiness, rather than exclusively to seed industries. The conclusions of the feasibility study were that the current project should be broadened to include assistance to agribusinesses of various types, and that the ICD has the capacity to undertake this expanded role.

The evaluation was conducted on the basis of personal interviews, document reviews, and one field visit. Interviews were held with people in the following types of organizations: international donor institutions, member companies of the ICD, USAID missions, seed associations, senior associates, and AID project officers. Trips were made to New York and Washington to interview the ICD and AID staff and to review files. A field visit was

arranged in Thailand to interview USAID mission and Royal Thai Government officials involved in ICD's activities in that country.

None of the the ICD activities has matured to the point where meaningful, quantitative field measurements could have been employed. The evaluation involved a total of 30 person days of work, for a total cost of \$16,000.

15. External Factors

The adoption of improved seed varieties offers a means for developing countries to increase agricultural yields without significant increases in capital inputs. Yet their adoption is not great, despite their availability. An FAO study found that while 85% of developing countries have improved crop varieties available, nearly all such countries lack an adequate supply of seed at the farmer/user level. The problem seems to be linked as much to the absence of commercially-oriented seed industries as to technical production problems. Most developing countries lack seed industries which are operated on a commercial basis, and LDC governments frequently assume a dominant role in the development of seed varieties and their dissemination to farmers. Public seed companies are often poorly managed and many LDC governments pursue policies which effectively, if inadvertently, stifle the development of private sector seed companies.

Two important assumptions in the project design are that beneficiary countries would be receptive to a wider role for the private sector in the seed industry, and that there would be no insuperable barriers to establishing viable, commercial seed enterprises. In fact, there have been obstacles to building commercial operations, largely because of unfavorable government policies. Recognizing the questionable validity of these assumptions, the ICD turned to assisting host country governments to analyze and reformulate their policies as necessary.

16. Inputs

In nearly all categories of inputs, there was significant deviation from original project design targets. The level of assistance in public policy reform increased substantially as it was found that such policies were a major factor in hindering the development of commercially-oriented seed industries in LDCs. In turn, the level of direct technical assistance to LDC commercial seed industries has been relatively low because of the scarcity of these industries (and also because of the slow start for requests for assistance).

A much greater effort than anticipated was required to develop a network of commercial seed industry sources in the developed countries which could provide short-term assistance on field trips and intern training in their plants. Accordingly, the level of training, which was to account for about 50% of the grant funds, has been much lower than anticipated. Thus far about 9% of project funds has been used for this function.

17. Outputs

Progress toward achievement of project outputs has been slow because LDC private sector seed industries have been more rudimentary than expected. The project log frame anticipated that project outputs would be viable commercial seed industries, an operating seed industry system in each target country, and trained personnel involved in commercial seed activities. A significant amount of time is still required for commercial seed industries to develop and be considered viable. Government policies must first be changed, and only then can commercial seed industries begin to emerge. Training is also behind schedule because of the lack of demand for this service by LDC governments (internships may not have been appropriately tailored to their needs) and the difficulty of placing large numbers of interns in U.S. and European seed industries for on-site training.

18. Purpose

The purpose of the project is "To stimulate development of commercial seed industries in target developing countries." While this purpose is still valid, the strategy has necessarily changed to achieve such development. If the new emphasis on establishing the requisite policy climate is successful, then commercial seed industries should start to emerge by the end of the project in countries in which the ICD has already worked. Perhaps in Thailand and Sri Lanka more fully developed industries can be expected by the end-of-project because of the existing commercial orientation of those two economies.

Enumeration of organized commercial seed enterprises in the target LDCs, an objectively verifiable indicator for this purpose, has been behind schedule because of the slow response of the missions. Heavier promotion for the project recently has generated greater cooperation, however.

The high quality of technical assistance received so far by the countries served by the ICD should lay the groundwork for successful, commercially-oriented industries. Firms should be better able to determine the market demand for different seed varieties, establish effective distribution systems, and implement appropriate pricing policies to make their commercial operations viable.

19. Goals/Subgoal

The goal of the project is "To improve the production of basic grains in developing countries." The goal would still appear to be valid, and achieving the project purpose can be expected to contribute to the goal. Measurement at the goal level cannot reasonably be made during a mid-term evaluation, but delays in achieving the project purpose will no doubt delay meeting the goal. The Thailand case might be one exception. The ICD training of government seed plant managers in handling important basic grains can be

expected to have an effect upon the nation's output of basic grains. Certified seed use has jumped by a factor of 5 in the last 3 years.

The effects of the Mississippi State University project in the development of the technical aspects of seed production in LDCs will undoubtedly contribute to the achievement of the project goal.

20. Beneficiaries

No beneficiaries are explicitly identified in the project paper. One can assume that direct beneficiaries would be parastatal and private seed companies and seed experts receiving training. Indirect beneficiaries would be farmers who should be able to obtain improved seeds at a reasonable price and consumers who should obtain greater amounts of food at lower prices. At this stage of the project, it is doubtful that indirect beneficiaries have received any benefits. As of the date of the evaluation only one LDC seed expert had received intern training with a seed company in a developed country, while a score of commercial operators has received some general training through in-country workshops. As of yet there have been few benefits from better government policies, although these can be expected shortly in Turkey and possibly Tanzania and the Caribbean.

21. Unplanned Effects

There have ^{been} negative unplanned effects of the project. A positive effect has been the encouragement of LDC governments to reorient their policies to accommodate greater commercial activity in their seed industries.

22. Lessons Learned

- 1) Centrally funded projects which offer resources and solutions for which USAID missions have little understanding and appreciation require a vigorous promotion component, or the project will waste valuable time and resources getting started;

- 2) Network-building to mobilize the resources of private companies of developed countries on a non-reimbursable basis to assist LDCs takes a considerable amount of time and money;
- 3) The best services can be relatively ineffectual when the implementing LDC entity lacks political or commercial power and when the LDC government does not provide the proper policy environment.

23. Special Comments or Remarks

Despite the problems the project has faced, the ICD has demonstrated intelligence and flexibility in adapting the project to external factors which were unknown at the time of project design. The ICD has also proven that it can deliver a very high quality service.

A new question which has emerged is how this field service-oriented project fits into the Science and Technology Bureau's recent emphasis on research.

Project Title: Commercial Seed Industry Development

Narrative Summary	Objectively Verifiable Indicators	Means of Verification
To improve the production of basic food grains in developing countries	Increased per unit-area yields of major crops in target countries	<ol style="list-style-type: none"> 1. National production statistics 2. FAO reports on world production
OSE: To stimulate development of commercial seed industries in target developing countries	Enumeration of organized commercial seed enterprises in target developing countries, and appraisal of their effectiveness in supplying high-quality seeds to farmers	<ol style="list-style-type: none"> 1. Official reports by host country regulatory agencies 2. Reports of USAID country missions 3. Reports of UNDP, FAO and World Bank
MIS: <ol style="list-style-type: none"> 1. Viable commercial seed enterprises 2. An operating seed industry system in each target country 3. Trained personnel involved in commercial seed activities 	<ol style="list-style-type: none"> 1. Tabulation of businesses or other seed agencies 2. Appraisal by government agency 3. Data provided by business or governmental agencies 	<ol style="list-style-type: none"> 1. Seed association or regulatory agency reports 2. Report of Ministry of Agriculture, USAID, FAO, UNDP, World Bank 3. Project reports, reports from above agencies
S: <ol style="list-style-type: none"> 1. Host country cooperating offices and agencies 2. Cooperating firms from developed countries 3. AID funding - total of \$825,000, life-of-project 4. Qualified project director 	<ol style="list-style-type: none"> 1. Evidence of actual cooperation 2. Evidence of participation 3. Appropriation and transfer of funds 4. Staffing and competent performance 	<ol style="list-style-type: none"> 1. Reports provided by project, USAID, and host government 2. Reports of project and cooperating firms 3. AID and project reports 4. Project reports, evaluation by AID and Executive Secretary, ICP

Important Assumptions

1. That weather and climate remain favorable for improved crop production and higher yields
 2. That conditions in target developing countries are favorable for improvement of agricultural production
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1. That host countries are receptive to concept of commercialized seed industry in major role
 2. That farmers in developing countries will need and use improved seeds, and be willing to buy them
 3. That several seed firms in developed countries will be willing to cooperate in project program and activities
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1. That there are no insuperable barriers to establishment of viable commercial seed enterprises in target countries.
 2. That improved seeds will yield high enough returns to farmers that ongoing viability of the seed enterprise is favored
 3. That personnel receiving training overseas will be employed in the seed trade and retained in the system for reasonable periods of time
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1. That the governments of host countries will cooperate with the program
2. That cooperating developed-country firms will retain their interest and willingness to participate in the program at least for life-of-project
3. That AID will continue to receive and appropriate the necessary funds
4. That a well-qualified, experienced individual can be recruited and retained for service as Project Director

Summary of Evaluation

1. Summary. The Commercial Seed Industry Development Project represented a new thrust for the S&T Bureau when it was created to promote development of the commercial aspects of seed industries in LDCs. The Industry Council for Development has been able to effectively organize the resources of seed industry companies and seed experts in developed countries by establishing a network of "senior associates" (on-call consultants) and other seed experts from seed companies as resources to the project. The time, money, and energy to accomplish this, however, have been far greater than originally anticipated.

Because of the uniqueness of the ICD approach and the existence of another, albeit different type of AID seed project, USAID missions have been slow to request the program. Funds have not been expended for field services at the level originally planned, especially in the area of training. Likewise, the ICD has found it more difficult than originally anticipated to place LDC seed experts in seed companies in developed countries for internships. The ICD needs to increase its network of companies willing to participate in this component of the project. The problem of inadequate field requests, however, no longer exists and the ICD has recently received a large number of mission requests that will fully utilize its grant funds.

When the project began, the ICD found that commercial seed industries were not established in most LDCs, so the focus of the project shifted from direct assistance to indigenous commercial seed operations to government policy reform. This has been a correct decision and the ICD has been able to

1. Mississippi State University has an AID centrally funded project that has existed since 1955. Also MSU has cooperative agreements with certain missions/host governments, including Thailand.

play an important role in getting LDC governments to revise their policies so that commercially oriented seed operations can be developed.

Finally, the ICD has been highly successful in providing high quality services to field missions and in gaining the respect of both LDC and developed country seed industry experts.

2. Evaluation Methodology. This is an interim evaluation designed to qualitatively measure the progress of the ICD seed project to date. It was programmed in the project paper, although it has taken on an additional dimension of assessing the capacity of the ICD to expand its services to all types of agribusiness, rather than exclusively to seed industries.

The evaluation was carried out on the basis of interviews with a wide variety of people involved directly and indirectly in the project. Likewise, a field visit was made to Thailand to consult with the Mission and Royal Thai Government officials involved in ICD's activities in that country.

Interviews were held with people in the following types of agencies: international donor institutions, member companies of the ICD, AID Missions, seed associations, senior associates, and AID project officers. Finally, a trip was made to New York to interview the ICD staff and review its files. None of the ICD activities have matured to the point where quantitative of field measurements could have been employed. The evaluation involves a total of 30 person days of the evaluators.

3. External Factors. The use of improved seed varieties offers a means for developing countries to increase agricultural yield levels without significant inputs of capital, yet their adoption is not great despite their availability. A FAO study found that 85% of developing countries have improved crop varieties available, yet nearly all such countries lack an adequate supply of seed at the farmer/user level. The problem seems to be

linked as much to the lack of commercially oriented seed industries as to technical production problems. Most developing countries lack seed industries that are operated on a commercial basis, and LDC governments frequently assume a dominant role in the development of seed varieties and their dissemination to farmers. The result is that they are often poorly managed and LDC seed industry experts lack even rudimentary commercial skills to bring efficiency to parastatal seed operations. Likewise, LDC governments frequently pursue policies which effectively, yet inadvertently, stifle any private sector development of private seed companies.

4. Inputs. Almost all of the project inputs changed in amounts relative to the original project design. The level of assistance in public policy reform increased substantially as it was found such policies were a major factor in hindering the development of commercially oriented seed industries in LDCs. In turn, the level of direct technical assistance to LDC commercial seed industries has been extremely low, because of scarcity of such industries.

A substantially greater effort than anticipated was required to develop a network of commercial seed industry sources in the developed countries which could provide short term assistance on field trips and for intern training in their own plants. Likewise, the level of training, which was to use about 50% of the grant funds, has been much lower than anticipated. Thus far about 9% of project funds have gone for this function.

5. Outputs. The project outputs have not been achieved because LDC seed industries have been at a more rudimentary level than anticipated. The project log frame anticipated that project outputs would be viable commercial seed industries, an operating seed industry system in each target country, and trained personnel involved in commercial seed activities. Viable commercial

seed industries have not been achieved because it will take a significant amount of time for them to develop. Government policies must first be changed, and only then can commercial seed industries begin to emerge. The ICD has found that it takes a significant amount of time to achieve such changes. Training is also behind schedule because of the lack of demand for this service by LDC governments and the difficulty of placing large numbers of interns in U.S. and European seed industries for on-site training.

6. Purpose. The purpose of the project is: "...to stimulate development of commercial seed industries in target developing countries." While this purpose is still the focus of the project, the strategy has necessarily changed in emphasis to achieve such development. If this emphasis is successful, commercial seed industries should start to emerge by the end of the project in countries in which the ICD has already worked. It is not realistic to expect fully developed industries by that time because of the current rudimentary level which exist. Perhaps in Thailand and Sri Lanka more fully developed industries can be expected by the end-of-project because of the current commercial orientation of those two economies. The commercial capacity of these industries in these two countries will be somewhat weak because the training component of the project has not reached an adequate level.

The high quality of technical assistance received by all countries served by the ICD, should lay the groundwork for successful, commercially oriented industries. Firms ought to be able to determine the market demand for different varieties and establish effective distribution organizations which can implement adequate pricing policies to make their commercial operations viable.

7. Goals/Subgoals of Project. The goal of the project is: "... to

improve the production of basic grains in developing countries." There are no stated subgoals. The project has not progressed to the point where this can be expected at this time. The Thailand case, might be an exception. The ICD training of Government seed plant managers in handling specific, important basic grains, can be expected to have an intermediate effect upon that nation's output of basic grains. Certified seed use has jumped by a factor of 5 in the past 3 years.

As previously noted, while the achievement of the project purpose will bring about the project goal, it will take more time than originally planned at the start of the project because of the extremely low level of development of commercial seed industries in LDCs. The effects of the Mississippi State University project in the development of the technical aspects of seed production in LDCs has undoubtedly contributed to the achievement of the project goal. The achievement of the goal would take even more time without the prior and current input of this latter project.

8. Beneficiaries. No beneficiaries are identified in the project paper. One can assume that direct beneficiaries would be parastatal and private seed companies and seed experts receiving training. Indirect beneficiaries would be farmers who should be able to obtain improved seeds at a reasonable price and consumers who should obtain greater amounts of food at lower prices. Because of the current stage of the project, it is doubtful that indirect beneficiaries have received any benefits at this point. Only one LDC seed expert has received intern training in a seed company in a developed country and a score of commercial operators have received some general training through in-country workshops. As yet they have not benefitted from better government policies, although this will shortly happen in Turkey and possibly in Tanzania and the Caribbean.

9. Unplanned Events. Unplanned events have already been mentioned: (1) slow level of field demand for ICD services in the first 2 and one-half years of the project, (2) rudimentary level of commercial seed operations in LDCs because of government policies, and (3) the lengthy time required to build a network of resources in developed countries and an inventory of needs in developing countries. All of these unplanned events required changes in the project strategy and have caused some sub-optimal use of AID grant funds.

10. Lessons Learned. (1) Centrally funded projects which develop resources and solutions for which AID missions have little understanding and appreciation require a vigorous promotion component or the project will waste a fair amount of time and resources getting started; (2) Network building which mobilizes the resources of private companies of developed countries on a non-reimbursable basis to assist AID missions require a significant amount of time and resources before they begin to bear fruit; (3) The best and highest quality services can be relatively uneffectual when the implementing LDC entity lacks political or commercial power or the LDC government will not provide the proper policy environment.

11. Special Comments and Remarks. Despite the problems the project has faced, the ICD has shown intelligence and flexibility in adapting the project to external factors that were unknown at the time of project design. It has also proved that it can deliver a very high quality service. It is unclear, however, how the seed project fits into the new emphasis on research in the Science and Technology Bureau.

Attachments: Appendix A	Statement of Work of Evaluation
Appendix B	List of Persons Interviewed
Appendix C	Organization of the ICD
Appendix D	Memorandum of Understanding with Royal Thai Government
Appendix E	Report on Thailand Evaluation Trip
Appendix F	Notes from Thailand Intern's Report

Appendix G

Appendix H

Appendix I

Audited Financial Statement:1982 Draft
Pamphlet:Commercial Seed Industry Develop-
ment Program

Pamphlet: ICD Objectives-Principels-
Organization-Activities

I. INTRODUCTION

A. Background

This report is an interim evaluation of the Commercial Seed Industry Promotion Development Project (CSIPD), currently being executed by the Industry Council for Development (ICD) and managed by S&T/MD. The project was approved in the fall of 1979 and became operational in the late spring of 1980. The total grant contemplated was for the amount of \$825,000.00 to be disbursed over a three year period. The grant funds have not been disbursed as rapidly as anticipated so the life of the project has been extended an additional two years at the same level of funding.

The basic purpose of the project is to increase agricultural production in AID assisted countries by stimulating the development of commercial seed industries in such countries. This is to be accomplished by : (1) inventorying international seed industry resources of developed nations, and needs in LDCs; (2) promoting the development of indigenous commercial industries, private or parastatal, in LDCs; and (3) providing training of seed specialists to operate seed enterprises.

The implementing organization for the contract, the Industry Council for Development (ICD), is a non-profit organization located in New York City. It operates with a small staff of two professionals, an administrative assistant, and two support staff people. Prior to the project, the ICD operated as the Industrial Cooperation Programme (ICP) of the Food and Agriculture Organization (FAO) of the United Nations. While it is now an autonomous entity, it continues to maintain strong ties with the United Nations system on an informal basis.

The ICD is supported by a membership which includes large private companies principally located in the United States and Europe, although there

are several member companies whose headquarters are located in developing countries. A board of directors includes a chairman, two vice-chairmen, and a treasurer, all of whom are drawn from member companies. The Board has the responsibility to direct the overall policies of the ICD. As of June 1983, there were 34 members of the ICD, 10 of which joined in the prior 7 months. The increase in membership is part of a conscious policy of the ICD to expand its membership to approximately 50, at which level it intends to remain.

Twenty-two of the members have their headquarters in Europe, of which two have their head offices in Eastern Block countries. The United States and Canada have 7 members and developing countries are represented by firms located in 3 such countries, in addition to a Saudi Arabian company. Although the United States has only 6 member companies, they have tended to be the most active in the ICD's operations.

The member companies of the ICD each pay an annual fee of \$8,500 which is the principal source of revenues for the ICD. As the seed project has accelerated its pace, however, the AID seed grant has become an important source of financing for the ICD. The AID grant represented 36% of ICD's 1981 revenues and about 47% of its income in 1982. Since the AID grant funds are limited to seed activities, the ICD used its other funds to cover general administrative costs and to finance its agribusiness assistance program.

The ICD provides assistance through two sources. The first is through its four "senior associates" who are professional seed experts whose services are on-call when the need arises. These four senior associates include:

J.I. Hendrie: a seed expert who retired from Shell International Chemical Co., where he worked in the seeds area, among others;

V. E. Gale: a retired agriculturalist who has worked with the FAO in West Africa and the ICP, the predecessor organization to the ICD;

Leon Steele: retired seed specialist for Funk Seed Company of the United States;

Alex Grobman, Director of INIPA, a Peruvian Government institute in charge of agricultural research and extension; also a world expert in plant breeding.

In addition to these four senior associates, the ICD relies upon its member companies to provide senior staff who have international experience for specific short term assignments in response to country requests. While it has principally relied upon its senior associates in the seed program, the ICD has also sent out several professionals from seed companies.

B. Evaluation Methodology

This is an interim evaluation designed to qualitatively measure the progress of the ICD seed project to date. It was programmed in the project paper, although it has taken on an additional dimension. S&T/MD is considering the possibility of having the ICD expand its AID funded activities from just seeds to more general agribusiness development. It is contemplated that the mode of operation would be similar and the types of services would be the same. Thus S&T/MD is interested that this evaluation include an assessment of the capacity of the ICD to take on this broader scope of work. This is done in a separate report.

The evaluation was carried out on the basis of interviews of a wide variety of people involved directly and indirectly in the project. Likewise, a field visit was made to Thailand to consult with the Mission and Royal Thai Government officials involved in ICD's activities in that country. Also an overseas call was made to the USAID/Tanzania Mission to discuss its impression of the ICD's performance in that country.

The types of institutions from which individuals were interviewed varied

a great deal. Interviews were held with people in the following type of agencies: international donor institutions, member companies of the ICD, AID Missions, seed associations, senior associates, and AID project officers. Finally, a trip was made to New York to interview the ICD staff and review its files.

None of the ICD activities have matured to the point where quantitative measurements could have been employed in the evaluation. Activities have not reached the level where the creation of new or the improvement of existing seed companies could have been examined as the basis for measuring the impact of the program. While some observations can be made with regard to the impact of its efforts to re-direct government policy, such changes come about slowly. The evaluation, therefore, has been based on sifting through the opinions of those involved in the project and drawing conclusions on the basis of those opinions. The evaluation involves a total of 30 person days of the evaluators.

C. Summary of ICD Seed Activities

Under the seed industry program the ICD has carried out seed promotion activities in 7 countries and/or regions. These have included the Caribbean region through the Caribbean Food Corporation, Tanzania, Sudan, Thailand, Turkey, Pakistan, and Kenya. The involvement of the ICD in each of these areas has varied to a considerable degree in the length of time and the extent of assistance. A basic understanding of the background and assistance given under each of these activities is important to evaluate the shifts that have occurred and the level of performance of the ICD. Below is a brief summary of the ICD's overseas activities:

Caribbean Region/Caribbean Food Corporation. The Caribbean Region was the first area in which the ICD carried out overseas activities under its seed

program. It has also turned out to be its most complex and frustrating experience. Assistance was provided through the Caribbean Food Corporation (CFC) which had just come into operation when the ICD began its assistance program in the region. As Table 1 shows, the involvement of the ICD in the Caribbean has been extensive, starting in mid-1980, and continuing to the present time. Under the seed program, the ICD has provided the following services to the CFC: (1) designed a regional seed industry program; (2) provided an analysis of existing and proposed seed industry legislation; (3) provided production assistance to national seed firms; (4) conducted a survey of the regional seed market; and (5) designed a regional seed training course. Because the CFC has suffered from substantial administrative problems and lack of political support, almost none of the activities designed have been implemented to date on a regional level.

Thailand. In 1976 the AID Mission in Thailand implemented a seed project in the amount of \$3.7 million to finance the purchase of equipment for processing and testing seeds, training programs, and technical assistance from Mississippi State University. In early 1981, the ICD was requested to send an expert to assist the Mission in an evaluation of the project. As a result of its participation, further assistance was requested of the ICD in conjunction with designing a second follow-on seed project to be directed by MSU. The design included an ICD assistance component. The principal form of ICD's assistance were to be management interships in U.S. seed companies and national in-country management workshops and advisory services.

In August of 1982, a senior Thai official was sent to Cold Kist in Georgia for intern training as part of a collaborative agreement which had been signed by the ICD with the Royal Thai Government. Two additional interns are to receive training later this year and an in-country workshop is to be

put on by the ICD.

Turkey. The ICD provided assistance to the Government of Turkey at the request of that government and the International Finance Corporation (IFC). The Government was interested in making a major policy re-evaluation of its seed industry with the possibility of promoting the development of a commercially oriented seed industry. To further this objective the government and the IFC invited the ICD to identify markets for seeds, evaluate alternative strategies to satisfy local demand for seeds through private companies, and to outline necessary government policy changes that would be necessary to promote the development of a private seed industry.

In February and March of 1982, the ICD sent a four person team to Turkey which conducted an extensive survey of the seed industry and made comprehensive recommendations to the government to promote a commercial seed industry. After considerable review of the ICD's recommendations, the Government of Turkey made a wide range of changes in its policies to encourage a more commercially oriented seed industry. In a number of instances, recommendations made by the ICD were adopted in substantially the form they had been made.

Pakistan. In April of 1982, the ICD provided assistance to Pakistan to help government and seed industry officials discuss constraints to the development of the country's seed industry. The catalyst for the workshop was a Pakistan agribusiness company which is a member of the ICD. As a result of the seed industry workshop, plans are underway to develop an ICD management training program to be located at the Ali Technical Institute in Lahore, Pakistan.

Kenya. The contemplated activities of the ICD in Kenya arose out of the operations of the Kenya Seed Company (KSC). The KSC is a 20 year old

successful parastatal seed company that recently decided it wanted to expand the scope of its operations. The Private Enterprise Bureau of AID as well as the Commonwealth Development Corporation of the UK and the IFC were all interested in investing in this expansion. The PRE Bureau conducted some preliminary studies and the Mississippi State University seed program was contracted with regard to its possible assistance to help establish a new extension program as part of KSC's expansion. As an additional component to AID's involvement, the Mission decided that it wanted advice from the ICD regarding commercial and business aspects of KSC's overall operations.

In June of 1982, a senior associate of the ICD made a preliminary reconnaissance trip to Kenya as an add-on to other business in the region, to define a precise scope of work for the ICD's assistance. Although this work was completed, a subsequent request from the AID mission never materialized, and the ICD has not been informed as to why.

Sudan. In 1975 the FAO initiated an improved seed production project in Sudan which contained an extensive overseas training component. In 1982, this activity was expanded through a loan from the African Development Bank which financed a program with an emphasis on seed production units and technical assistance by the FAO, including overseas training. As the project developed, however, the Government of Sudan changed its policy away from long term overseas training in favor of shorter in-country training.

In June of 1982, a senior associate of the ICD was in Sudan as part of its agribusiness assistance program. As a result of his discussions with the AID Mission and the Government, the services of the seed project of the ICD were requested. In April of 1983, the ICD carried out a survey of local training needs that could be undertaken within Sudan.

Tanzania. From 1971 to 1982, the Mission had a seed project in which

Mississippi State University (MSU) played an important role. The ICD was asked by the Mission to participate with a MSU staff member in an evaluation of the project. In November and December of 1982, a senior associate of the ICD and Dr. Potts of MSU carried out the evaluation. They made a number of recommendations regarding the injection of private sector management practices into Tansed, a parastatal seed company. The Government of Tanzania has taken the recommendations under advisement and is seriously considering them. Their implementation would represent a substantial policy re-orientation for the country; so the degree to which the government will implement the recommendations is not yet clear. The AID Mission, however, expects changes to be made as a result of ICD's input.

Pending Requests

On the basis of past activities and actual requests received from new regions, the following activities are pending and should be carried out this year:

Ivory Coast--through the World Bank a request has been received by the ICD to provide preliminary guidance to the Government of the Ivory Coast in the development of its commercial seed industry.

Zaire--again through the World Bank, a request has been received for the ICD to provide the Government of Zaire with assistance in the design of a comprehensive seed program which the World Bank has some interest in financing.

Sudan--as an outgrowth of its prior activities, the ICD expects to receive a request for carrying out training courses in the Sudan. Since the current project through the African Development Bank does not provide funds for such activities, the ICD's participation would appear to be quite attractive to Sudan, especially since in-country training is part of the new emphasis of the government.

Caribbean/CFC--the ICD is waiting for a change in the leadership of the Caribbean Food Corporation, which should be made shortly. The current director has resigned and a new one should be appointed in the not too distant future. The ICD expects that with new leadership in the CFC, implementation will begin on the many activities which the ICD has already designed.

Thailand--arrangements have been made for Funk Seed Co. in the United States to train an additional two Thai seed officials. In addition, in-country training will be carried out this calendar year under the collaborative agreement between the ICD and the Royal Thai Government.

TABLE 1
OVERSEAS SEED ACTIVITIES OF THE ICD, 1980-First Half 1983

AREA	1980				1981				1982				1983	
	1	2	3	4	1	2	3	4	1	2	3	4	1	2
Caribbean/CFC	x	x	x		x		x		x	x				x
Thailand					x				x		x			
Turkey									x					
Pakistan											x			
Kenya												x		
Sudan												x		x
Tanzania													x	
<u>Pending 1983:</u>														
Ivory Coast														Thailand
Zaire														Sri Lanka
Sudan														Pakistan
Caribbean														

Sri Lanka--the ICD received a formal request to provide the Government of Sri Lanka with assistance in making a survey of its national seed industry as well as advising the government on public seed policy.

Pakistan--on the basis of its conversations with its member firm and the

Government of Pakistan, the ICD expects to conduct an in-country training course in 1983.

As can be seen from Table 1, ICD's overseas activities started slowly but began to accelerate at the beginning of 1982. Responding to pending requests will probably require almost as much ICD human and direct overseas financial resources as it has already used in its entire previous experience under the project.

II. Log Frame Issues

A. Adequacy of Project Design

1. Project Goals and Assumptions. The project goal and project purposes as stated in the log frame of the project paper are as follows:

Goal: To improve the production of basic grains in developing countries

Purpose: To stimulate development of commercial seed industries in target developing countries.

In a general sense the project goal would still appear to be appropriate and valid. Many AID assisted countries experience significant short falls in grain production for which they can compensate to varying degrees through the use of improved seed varieties to raise yield levels. It is not clear, however, that a seed project should have as its goal a focus on only raising basic grain production levels. The project by its very nature deals with government policy issues and commercial management training techniques which are appropriate for the development and commercial dissemination of any seed varieties, including seeds for vegetables as well as grains. The project activities themselves have reflected this incongruity by the fact that vegetable seed needs as well as those for grains have been considered. The project goal might be somewhat more realistic if it put its major emphasis on grains, as has been the case in practice under the project, but avoid making it the exclusive goal of the project.

The project purpose of stimulating the development of commercial seed industries in AID assisted countries would appear to still be realistic and one which is responsive to seed problems in developing countries. In many respects this shows a foresight in purpose which preceded the private sector emphasis of AID and the creation of the Private Enterprise Bureau (PRE) to promote the development of commercially viable enterprises through AID

assistance. Likewise, the emphasis would appear to be quite timely. A recent publication by the World Bank on Africa, for example, pointed out the large number of African countries which are reappraising their policies with regard to the commercial orientation of productive activities. Certainly major donor agencies such as AID, the World Bank, and the Commonwealth Development Corp. have given an increased emphasis to this focus.

Most of the assumptions of the log frame would appear to still be valid in light of the experience of the ICD to date; although some of them have not yet been tested because project activities have not reached a point that would allow an assessment.

Two related assumptions, however, would appear questionable in some countries in which the ICD has carried out seed assistance. One of the assumptions of the log frame is that host countries are receptive to the concept of a commercialized seed industry playing a major role in their economies. In practice, however, the ambivalence or opposition of governments to this idea has been an important barrier to the implementation of recommendations by the ICD in specific countries, such as Tanzania. The seed industry in any country by its very nature is more closely linked with government than most other industries. Public entities must set and enforce standards, certify seed quality, and set import and export restrictions on seed materials. Thus, there is an important continuing role for the public sector in seed industry development, even where the government has a policy favoring private sector dominance of commercial seed operations. There is a history of governments in LDCs pre-empting the seed industry through parastatal companies which frequently do not operate on the basis of a commercialized industry; but rather on the basis of social objectives such as providing seeds to farmers at subsidized prices, despite the costs of

government development and production of improved seed varieties. The consequence is that when the ICD makes recommendations for the development of a commercially oriented seed industry, this requires that a government reconsider its philosophy toward the development of a seed industry. Experience to date would suggest that the ICD should not provide its services to a country until some real and substantial manifestation has been made by the government showing a willingness to seriously examine the alternative of operating its seed industry on a commercialized basis even if the object of assistance is a parastatal company.

A second related assumption of the log frame was that there are no insuperable barriers to the establishment of viable commercial seed enterprises in target countries. Certainly government policies contrary to such an approach are an insuperable barrier, and the barrier on which the ICD has focused its greatest attention to date. Thus, this assumption would also appear to be invalid, except where shown otherwise.

2. Project Strategy. The strategy of the project to achieve the purpose and goal of the project involved three types of assistance. These include:

- (i) creation of an inventory which identifies seed industry resources in primarily developed countries as well as interests and needs in developing countries;
- (ii) promotion of LDC seed industries for the commercial marketing and distribution of seed; and
- (iii) training of seed specialists and skilled manpower to operate seed enterprises.

In order to examine the adequacy of these strategies in relation to the purpose and goal of the project a more detailed description of the strategies is given and then several comments are made regarding their adequacy.

The project was to initially focus its efforts on the development of the inventory. It was to be developed, according to the project paper, by contacting commercial seed firms in developed countries, seed trade associations, and other seed sources which could provide assistance through the program. Then, with the help of the AID Missions and the FAO, seed industry needs in developing countries were to be inventoried. The ICD was to take trips to LDCs to enlarge the scope of the inventory and obtain more detailed information as time went on. The inventorying process was to take approximately nine months, which would be the basis of future operations of the ICD. The project was to function so that the inventory of developed country seed resources would be matched up with the needs of developing countries on a case by case basis, and be the basis for its assistance program.

The inventory strategy to identify and classify needs has been inadequate as a means to bring developed country expertise to bear on those countries which can utilize them. It is probably inadequate because it cannot reasonably be done as envisioned in the project design. The ICD invested considerable effort and resources in the development of its inventory of resources in developed countries. It made contact with the International Seed Federation (F.I.S.), the American Seed Trade Association (ASTA), and specific seed companies to determine their willingness to provide their resources to the project. Experience to date would suggest that the ICD was successful in obtaining the cooperation of these groups.

The development of the inventory of needs, on the other hand, was not do-able as conceived in the project. AID Missions were not particularly responsive to helping provide information and contacts upon which the ICD could identify the specific needs of specific LDCs. Informational cables to the missions outlining the purposes and services of the project and meetings

with AID/Washington regional bureau people did little to fill the gap. Consequently, the identification of LDC needs has been done on an ad hoc basis, which has been a relatively inadequate means for developing a priority schedule for ICD's assistance program.

Centrally funded projects such as the ICD seed program are generally at the mercy of AID Missions to obtain information but the Missions are frequently uninterested in helping such projects where they perceive no immediate benefit to themselves. Thus an inventory strategy must include a much more comprehensive and aggressive inventorying component than this project contained.

The promotion and assistance strategy was to focus on matching needs and resources from the inventory by promoting cooperative arrangements between governmental agencies and entrepreneurs in the developing countries, on the one hand, and public or private seed enterprises in the developed countries on the other. The ICD was to act as an impartial broker to establish these collaborative relationships.

This strategy would also appear to have been inadequate for several reasons. First, seed companies in developed countries are not willing to contribute as much as a collaborative arrangement would imply, unless there is some important benefit in it for them. Where such possibilities are present, however, developing countries are reluctant to make a commitment for fear of being taken advantage of. In fact, one of the most successful aspects of the ICD seed program has been the ability of the ICD to stand between LDCs and developed country seed companies to assure LDCs that multinational seed companies are not providing assistance in order to take over their seed industries.

In actual practice the ICD has been able to implement a better

strategy. The ICD has made itself the institution which has formed the collaborative arrangement with LDC seed institutions. The ICD has written collaborative agreements with the Royal Thai Government and the Caribbean Food Corporation. In both of these agreements the ICD has made commitments which involve resources from developed country seed companies, such as internships in U.S. seed companies, and those of its senior associates. Countries have been able to enter these agreements without making any long term commitments to any particular multinational seed companies or giving any of these companies any control over domestic programs.

The training strategy is one which is attractive to the countries which have received ICD activities, and it remains an important and essential component of the overall project. Some aspects of the strategy as outlined in the project paper, however, would not appear realistic for the group targetted. The internship training in developed country seed industries was projected to extend from 3 months to a year, with an average of 8 months, to enable the trainees to experience a variety of operations within the seasonal cycle. This type of training must involve high, responsible decision-makers. They are the resource in private companies capable of providing significant training to interns. Likewise, interns must be high level people, as they are the only ones who can return to their countries and change government policies.

Where this type of training would involve a relatively high level government official from a developing country the time length is unworkable. In the case of Thailand, for example, the trainee was gone for 2 months and he considered this too long to be away from his office, even though he found the training valuable. Internships will have to be streamlined to the degree that they involve such senior seed industry personnel, which is ICD's target group.

It would appear to the evaluators that the project strategy lacked an

important element--that of a systematic and comprehensive promotion of the project with AID missions and developing countries. While this is perhaps easier to see from hindsight, it would appear to have been important to make the project "take off" sooner than it has. As shown in Table 1, the overseas activities of the ICD were slow starting, other than in the Caribbean, until the first and second quarters of 1982. This was about 18 months after the start of the project, while the project contemplated only 9 months for the network building and inventory start-up processes. Now, of course, it would appear that the ICD faces the opposite problem--i.e. it now has as many requests as it can reasonably handle. Resources in the beginning of the project were undoubtedly used in a sub-optimal manner, however, because of the slow start. This might have been avoided had there been a more comprehensive information and promotion program aimed at the AID missions and LDCs.

It is worth noting that AID has generally been slow to facilitate the entry of the ICD seed program in countries. Of the total requests that the ICD has received, only about 40 percent of them were initiated by AID sources. The rest came through the World Bank, the UNDP, a private investment bank, and a member firm of the ICD.

The lack of AID responsiveness probably stems from two important sources. The first is the Mississippi State University (MSU) seed project, managed by the same office in S&T as the ICD project was initially. The MSU project is one of the oldest and best known of the centrally funded projects. Thus it is natural for AID missions to request the services of the MSU project when they have seed problems or want to undertake a seed project. It is unrealistic to expect the missions, on the basis of an informational cable, to understand that the MSU project is focused on the technical aspects of seed production, while the new ICD project focuses on commercial seed industry

management issues. The missions do not have the experience or knowledge of seed industries to be able to distinguish between of these types of services.

An equally important reason why more promotion was needed was because of the relative uniqueness of the project for AID, and particularly for S&T. As previously noted, at the time of this project AID was not heavily involved in projects with a commercial orientation. Except for the LAC Bureau, few projects of this type were developed in AID, and the S&T Bureau had almost none. Thus, the probabilities were low that AID mission agricultural officers reading a cable describing the ICD seed project would be sufficiently informed to understand its importance--especially because of the background of experience of AID field people. Consequently, it is the belief of the evaluators that the project strategy needed a more comprehensive promotion component in order to adequately execute the project purpose in the time frame contemplated at the outset.

3. Project Management by AID. The project was designed, approved and initially managed in the agribusiness division of S&T/AGR, and then moved to S&T/MD. There have been two project managers, and the second one continued to manage the project when it shifted offices.

The management of the ICD seed project by AID might best be characterized as relatively informal and non-bureaucratic. The AID project managers have kept in frequent contact with the ICD staff by telephone and have received copies of ICD reports and correspondence. Formal reporting requirements have been kept to a minimum and record keeping requirements have been adequate for AID monitoring purposes without being an unreasonable burden on the ICD. While there was no dramatic change in management style when the project was moved from S&T/AGR TO S&T/MD, the relationship was made a little more formal and more regular reports were required.

The informal management style has probably been the result of the small size of the project, the small size of the ICD staff, and the slow development of activities which have made it easy for the AID project managers to keep abreast of ICD activities. The ICD itself has been happy with the AID management style. The test of the management style of AID, of course, is to be judged by the results. On balance, the project management style was justified in light of the ICD's performance and it probably facilitated the smooth functioning of the project. The freedom given the ICD would seem justified because of the fact that the ICD was quick to adjust its program to the realities which it found at variance with the project as originally designed. This has been the case in both the government policy area and the use of collaborative arrangements. The AID project managers showed a flexibility and willingness to allow adjustments which now seem to have been good decisions.

The one area in which the AID management should have been more directive was that of identifying the need for assisting the ICD to develop a more vigorous promotion program aimed at AID Missions. This should have been clear to AID management during the initial year of the project. In many respects the ICD had to rely on the project manager to initiate such a program, although ICD certainly could have originated the idea.

A last point with regard to AID management is the apparent uncertainty in the mind of the ICD as to its future role in the S&T/MD. While it is exploring the possibility of expanding its activities into agribusiness, the ICD seems to sense that, while it was given a relatively free hand under S&T/AGR, it will have to fit within the overall strategy of the Multisectoral Development Office (MD). The ICD does not seem sure what this means in terms of its own ideas of how the seed activities should be run; in part because it

does not understand what is the overall strategy of MD. Further dialogue between the ICD and MD would be helpful in this regard.

4. Impact of Unplanned Events. The first unplanned event which impacted the progress of the project has already been referred to--the lack of requests for ICD's services in its initial operational phase. This can be seen through an examination of the destination of expenditures of the ICD in relation to funds received from AID from 1980 through 1982. The direct overseas expenditures listed in Table 2 include the direct costs of consulting fees to senior associates, their travel costs, in-country workshop costs, etc., but exclude costs of central administration of specific overseas activities and general administration costs.

The data from the table indicate that approximately 48 percent of the AID Seed grant funds to date have gone for the direct costs of overseas activities, including training (internships and in-country workshops) and technical assistance. If we assume that all 1979 and 1980 expenditures were for organizational start-up costs and network building, the direct overseas costs still amount to only 63 percent of the rest of the grant funds. While a part of this remainder was used for central administration costs to get these activities in the field, the figures show that the seed program has started rather slowly, using an inordinate portion of the grant funds on inventorying and network building. The lack of demand undoubtedly explains why a larger than anticipated portion of the funds was used for activities not directly supporting specific country activities.

Another unexpected situation encountered in the project was the lack of a private seed industry in most developing countries. Although the project paper anticipated assistance to both parastatal and private seed companies in

Table 2

Direct Expenditures for Overseas Seed Activities
In Relation to Total Revenues from AID

<u>Activity</u>	<u>Direct Overseas Expenditures Per Activity</u>	<u>Year</u>	<u>Total Aid Disbursements</u>
Caribbean	\$ 70,600	1979	\$ 16,300
Tanzania	\$ 10,000	1980	\$ 55,800
Sudan	\$ 5,900	1981	\$141,890
Thailand	\$ 27,000	1982	\$197,312
Turkey	\$ 26,000		
Pakistan	\$ 10,100		
Kenya	2,000		
TOTALS	\$ 150,700	1979-82	\$311,002

Source: Estimates by ICD; ICD audited financial statements, 1980-1982.

developing countries, a strong expectation can be seen in the document that the ICD would devote a major part of its activities toward strengthening private sector LDC seed companies. In part the company-to-company collaborative agreement strategy was based on this expectation.

As the ICD got more involved in LDC activities, however, it discovered that the private sector seed industries were almost non-existent in most AID assisted countries it serviced. On the basis of its experience the ICD became convinced that much of this was the consequence of government policies in these countries which pre-empted the private sector and/or stifled the development of private seed companies. It concluded that a prerequisite to the development of a viable private seed industry in such cases meant that

government policies had to first be corrected and then they could turn their attention to private seed companies. To do otherwise would be self-defeating.

The result of this unexpected situation was a major shift in program emphasis by the ICD. While policy advice was part of the technical assistance contemplated in the original project design, it became the center-piece of ICD's program and direct assistance to private seed firms in LDCs was not provided to any substantial degree. This has probably been one of the reasons why the ICD has relied more heavily on its senior associates than staff from member companies to provide assistance. The senior associates had expertise in the area of policy guidance, so it was natural to concentrate the ICD's policy assistance in them.

A related consequence was the revision of the collaborative agreement concept of the original project design. Company-to-company assistance was not appropriate where there were no private seed industries in developing countries.

As Table 2 showed, a substantial amount of the grant resources have gone into non-overseas activities. One of those has been the network building required for the project to take off. It has taken far more time, resources, and promotional effort than originally contemplated. This was due to the fact that not until recently were any of the ICD member companies active in seed investments, directly or through subsidiaries. Consequently, the ICD had to develop a seed resource network outside its formal membership, which was expensive and time consuming. Even now the network for supporting interships is not at the level expected in the project paper.

The consequences of the network building problem were not substantial, except from a cost point of view. Since there was not a great demand for the ICD's services, the senior associates were able to handle the majority of the

initial requests the ICD was called upon to service. Also because of the de-emphasis of company-to-company assistance, the lack of a network was probably not critical to ICD's early performance in the field.

From a financial point of view, however, at the end-of-project the total project expenditures for field supported services will probably be substantially less than what was anticipated at the beginning of the project. The lesson to be learned is that network building is an expensive process and only pays dividends in the long run. Now that the ICD faces a large demand for its services relative to its size, for example, the network building is only now beginning to provide substantial benefits. The only real alternative to incurring such expenses is to find a contractor that already has such a network in place. The type of network created through the seed project, however, was unique and no institution had access to a network of seed companies from which it could have drawn to provide technical assistance with few tangible benefits to itself.

5. Progress Toward Meeting End-of-Project Objectives. The project paper does not lay out a clear set of end-of-project objectives. Therefore, the evaluators can only make some general comments and estimates in this regard. First, it would appear that the ICD has developed a reasonable inventory of seed resources in developed countries. The inventory is not necessarily a workable network available to the ICD, however, upon which it may easily call. Certainly in the area of training resources, the ICD still needs to develop a far more extensive network of companies which are willing to take interns from LDCs. It has recently held talks with the F.I.S. and made visits to European seed companies to accomplish this.

The inventory of needs in the LDCs, on the other hand, is probably not well developed. The ICD will be too busy in servicing current requests to

develop this further, and this is probably the best outcome. The inventory of LCD needs was anticipated as a mechanism of matching LCD needs with developed country resources. The strategy was not entirely do-able and the current approach of servicing requests is probably a better alternative at this point.

The ICD has made good progress in promoting indigenous commercially oriented seed operations in LCDs. In Thailand, Turkey, and Tanzania it has helped provide a solid basis for such industries to develop; and with proper leadership from the CFC the same can be expected to happen in the Caribbean. It is still too early in the life of these activities to determine their ultimate success, but in terms of progress to date it would appear that the ICD has been quite successful.

The training of host country seed experts through internships in foreign companies and through in-country workshops would appear to be far behind schedule and one which will need to be accelerated in the future. Only one person to date has been trained through an internship with a U.S. seed company and only a couple of in-country training workshops have been held. The project paper noted that it was expected that about 50 percent of the budget would be expended for training. This is nowhere near a reality and it is doubtful that it will be reached by the end of project.

III. ICD Operation and Management

A. ICD Operations

1. Policy. An area in which the ICD appears to have had several impressive successes is that of seed policy reform. As previously noted, the ICD has put a major emphasis on changing the policy environment of the countries in which it works to stimulate the development of commercially oriented seed industries. It made a major effort in this regard in Turkey and the results of the ICD's efforts were seen in May of this year when the Turkish Government announced a large number of seed policy changes in the areas of import restrictions, seed certification requirements, and private investment in commercial operations which include seed investments. Foreign companies have specifically been requested to explore possible investments and the government has shown a disposition to substantially alter its traditional position.

A major achievement of the ICD has been its ability to continue to operate with the CFC and develop a comprehensive program of draft legislation which can be implemented by Caribbean countries once the CFC becomes an effective organization. The CFC and the Caribbean member countries of that organization have given the ICD unqualified support over a very long period of time, despite the shortcomings of the CFC itself. The ICD project is one of the few projects that has received this level of support throughout the difficult period which the CFC has passed. While the policy recommendations have not yet been implemented by the Caribbean countries, it would appear that this has been more the result of the ineffective leadership of the CFC rather than the lack of political support by the countries themselves. The past support of the ICD program would suggest that it has a good chance of success.

The impact of the ICD on Thai policy has been indirect but important.

One of the reasons the MSU team in Thailand supported the intern training program was because of its potential impact on high level Thai seed officials who could influence policy.

The last case of potential success of the ICD in the policy area is that of Tanzania. The ICD provided assistance to that government in the operation of its parastatal seed company, Tanseed. It made recommendations which involved substantial policy changes by that government. The AID Mission in Tanzania notes that the government has taken these recommendations under serious consideration and there is a good chance that they will be adopted.

2. Technical Assistance. The ICD has not had a large number of opportunities of providing technical assistance management services to specific seed industries, apart from specific training programs and policy guidance. It would appear that in those countries in which it has operated, however, the lack of resources of the ICD to provide major financing of seed projects has not been an impediment to its effectiveness. The ICD has enough resources available to finance a fair amount of training itself and it has been able to combine its services with those which can finance other components of a seed project. In Thailand the AID Mission had already financed one seed project and was ready to finance another. In Sudan the African Development Bank provided the government with the necessary funding for the major components of its seed project, so none were needed from the ICD. In Kenya various donor agencies were positioning for an opportunity to provide financing, and in Tanzania the AID Mission also had financed a seed project. Likewise, in pending requests the ICD is being asked to provide assistance in potential projects in the Ivory Coast and Zaire for which the World Bank is interested in providing financing. Thus, it would appear that the lack of major seed project funding resources by the ICD is not a hindrance

to the effectiveness of the seed program.

The responsiveness of ICD's program to AID Mission requests for assistance can only be judged by the missions themselves. In the cases of Thailand and Tanzania the missions themselves have given the ICD very high marks for the quality of services they have provided and the responsiveness to their concerns. In the case of Kenya it is not clear why the Mission decided not to utilize the services of the ICD. It is worth noting, since a number of the requests come from non-AID sources, the reaction of other donor agencies which have utilized ICD's technical assistance services. The IBRD, the UNDP, and the IFC staff involved with the ICD in Turkey and the Caribbean found the quality of services of the ICD to have been excellent. All three organizations expressed the highest respect for the ICD and its capacities in responding to their requests. The test of the sincerity of these complements by USAID Missions and other donor agencies is perhaps reflected in the fact that the World Bank has initiated a number of additional requests for the services of the ICD in the Ivory Coast and Zaire, and that pending requests in Sudan, Caribbean, Thailand, and Pakistan are all based on its previous work.

3. Training. The training program of the ICD under the seed project has been less successful than expected. The project paper contemplated that for years 2 through 4 of the project approximately 50 percent of the project expenditures would be devoted to training costs. It was estimated that from 6 to 10 trainees per year could be "easily" trained in U.S. seed company facilities, plus an undetermined number by companies in other developed countries.

In actual practice, a lot more has been spent on training needs surveys than on actual training itself through internships and in-country training workshops. If both direct training and preparation costs are combined for the

Caribbean, Sudan, Thailand, and Pakistan they still only represent a total of 8.6 percent of the total grant funds disbursed to the ICD. If ICD administrative staff costs were added to this for the time involved in arranging these training activities, it is doubtful that total training disbursements would come anywhere near the 50 percent contemplated at the beginning of the project.

This low level of training is a function of both the lack of requests for training and the lack of capacity of the ICD to place the numbers of interns in large seed companies as originally planned. The lack of demand can be seen from the fact that the ICD has discussed at length in-country training workshops in the Caribbean, Thailand, the Sudan, and Pakistan. While the ICD has been willing and able to perform these services the countries have been slow to get their side of the activities going, so the ICD has had to wait.

On the other side, when the ICD has faced a large internship request, it has not been able to perform quickly. In Thailand, the government requested that four Thai senior seed officials receive intern training in foreign seed companies. The ICD was able to place only one in a short period of time, and then after considerable effort was able to offer two additional internships for later this year. The ICD, on the basis of its experience, feels that with substantial efforts it can place a maximum of 4 interns per year. Several industry sources have acknowledged that the costs of seed companies to train an LDC seed expert are relatively high. Thus, it is unlikely that a company that has accepted an intern will be willing to do the same again the following season.

The original projections that training represent 50 percent of disbursements, however, do not appear unduly optimistic. If the average cost of internships and workshops were to be approximately \$15,000.00 each, then the

50% target could have been reached in 1981 by a total of 4.6 internships and/or workshops and by 6.4 in 1982. If the entire burden for reaching the target were to be based solely on internships, the ICD would probably have a difficult time reaching the target. If, however, a combination of workshops and internships were carried out in a single year, which would be much easier for the ICD, then this target would be quite reasonable and within its capacity. The lack of achievement of this target, however, is probably the most important shortcoming of the project, since training was envisioned as one of its central objectives. It would again appear that the lack of a vigorous promotion of the project to better inform the AID Missions of the training services of the ICD played a major part in this shortcoming.

The quality of the training received by the one intern has been considered by the Royal Thai Government to have been excellent. Certain aspects of the training, however, need some revision. As mentioned previously, the length of seed intern training for senior government officials must be shorter than that contemplated in the project paper. To accomplish this, however, certain revisions of the training program for such persons will have to be made. Because of the time constraint, it is possible that training should be focused on only one crop or only one or two activities, such as purchasing operations, processing, quality control, or field inspection. There is some disagreement on this point by Thai officials. This issue can be better addressed after a couple more training experiences. It is important to note that the ICD itself feels that internships should be limited to senior seed officials rather than lower level personnel in LDC government entities and private seed companies. In fact, the ICD specifically indicated to the Cameroon Mission that it did not want to focus its training on mid-level government people. Thus, the consequences of this policy must be integrated

into the design of the training program.

The Thai experience would also suggest that companies which accept a trainee need to make a more direct commitment to actually train the intern rather than just permit him to be an observer at the plant. The Thai intern felt that he was trained by men who had so many operational responsibilities that they did not have the time to give him specific training, nor did they necessarily know how to train. The ICD needs to make some detailed arrangements with seed companies who accept interns to make sure that a real commitment is made that certain plant individuals are oriented regarding how to train the intern and are given specific time to carry this out.

Finally, several details should be mentioned which will improve the training experience itself. In the Thai case the official who was trained was placed in a motel at the edge of town without a car for personal or professional use. Even though he spoke English, the result of the accommodations was to isolate him. A senior official with considerable responsibilities cannot be expected to live in such a situation, especially when he is not with other interns to provide some companionship and when the time period for training is more than a week or two. Also the Thai trainee found the weekly financial report very burdensome. It could have been eliminated by merely providing him with a per diem allowance for ordinary expenses.

4. Promotional Assistance of ICD. The ICD has been quite successful in attracting other capital support for its seed activities, although the existence of capital support was what gave rise to requests for ICD services in a number of cases. The ICD has been able, however, to attract contributions

Table 3
Non-ICD Funds Contributed to ICD Activities

Project	ICD direct over-seas expenditures	Other Funds	Source of Other Funds
Caribbean	\$ 70,600	\$150,500	CFC, EDF, UNDP, USAID Swiss Government
Tanzania	\$ 10,000	\$ 8,050	USAID
Sudan	\$ 5,000	\$ 1,000	Government of Sudan
Thailand	\$ 27,000	\$ 10,600	USAID, Royal Thai Govt. GoldKist
Turkey	\$ 26,000	\$ 9,150	Govt. of Turkey
Pakistan	\$ 10,100	\$ 4,600	Corn Products Co.
Kenya	\$ 2,000	--	
TOTAL	\$150,700	\$183,900	

Source: calculated by ICD from internal records from AID missions, regional organizations, UN agencies, international donors, and private companies. Table 3 gives an estimate of the funds and value of time which has been donated in its various projects.

As can be seen from the table, other funds have actually been greater than direct overseas costs expended by the ICD in its field activities. If the total seed grant funds are included, of course, this \$183,900 becomes only 59 percent of the total funds spent by the ICD. The amount in relation to the grant funds, however, is not insignificant.

B. ICD Management and Organization

1. Qualifications of ICD Staff and Senior Associates. An evaluation of the level of qualifications of the ICD management and associated consulting staff to carry out the seed program is to be determined by the manner in which the project has met its goals and adjusted to unexpected events, where such was in the control of these individuals. In this context

the comments already made are directly relevant to this point. The opinions of those who have worked with the ICD staff and senior associates on specific overseas activities are extremely complimentary of their abilities and the quality of their services. While specific programmatic changes have been suggested by some individuals interviewed, the evaluators in their interviews with a very wide range of individuals with different contacts with the project have found only highly complimentary evaluations of the ICD staff and its senior associates.

The ICD has involved a number of seed experts who are neither staff members of the ICD nor its senior associates to provide services. The assessment of field people as to the quality of these people also indicates that they have been well qualified and performed at a high professional level. This should be considered a major accomplishment. Several executives of seed companies and associations who have dealt with agribusiness companies noted that companies often give less qualified staff members to assignments where they get no direct benefits, because of the implicit cost to them of sending their more qualified and senior people. Thus, the ability of the ICD to obtain the level of people it has represents an important achievement of the project.

2. Impact of ICD's Special Relationship with Developed Country Seed Companies. Both donor agencies and executives in multinational seed companies have felt that the special relationship of the ICD with seed companies has been a key element in its ability to operate in developing countries with credibility. Both donor agencies, AID Mission personnel, and regional officials have noted that the acceptance of the ICD by LDCs has made it possible for the ICD to provide commercially oriented advice and assistance to developing countries. It was generally felt that these countries would not

have been receptive to this type of advice had it come through companies or donor agencies themselves. In fact, several individuals in donor agencies noted that this appearance of being independent of the multinational seed companies yet having access to their expertise has made the ICD uniquely qualified to carry out its functions successfully with developing countries. They noted that the countries have felt that they were getting the benefit of the technological information of the large seed companies in the developed countries without giving any special advantages to them.

It is important to note however, that the special position of the ICD has had an equally important impact on the large seed companies. It was pointed out by several industry sources that seed associations and companies are generally on their guard against consulting firms which frequently approach them regarding the availability of their staff for specific assignments. The ICD has been able to create a credibility with seed companies which has set it apart from consulting firms and which has allowed the expertise of these companies to be available to the project.

3. Sufficiency of Core Staffing. The core staffing has been sufficient to meet demands for the services of the ICD seed program to date. Although the level of demand is increasing substantially, the current core staff is sufficient to handle the anticipated volume of business. If the ICD were to service 6 to 8 requests this year, this would represent almost 2 months of time per request which should be within the capabilities of the ICD under its current staffing level. Likewise, the senior associate system of the ICD allows it to increase its capacity without making any long term staffing commitments, which is a distinctly beneficial mode of operation from both the ICD's and AID's point of view. If demand were to take another large leap as

it has this year, however, it is doubtful that the ICD would have grant resources to satisfy it, quite apart from any staffing needs.

IV. Conclusions and Recommendations

A. Conclusions. The evaluators would make the following general conclusions:

1. The seed project has been successful in holding to its general objectives which represent an important focus on the commercial development of seed industries in keeping with AID's new private sector emphasis.

2. The ICD and the AID project managers have been flexible in shifting project strategies when it became clear that this was necessary to achieve the basic objectives of the project.

3. The development of a needs inventory in LDCs was not adequately designed and never really accomplished.

4. Network building of large companies in the developed countries is both a time consuming and expensive process, and only has pay-offs over the long term; short term benefits are highly unlikely. This is especially true when no real network exists in the contractor or any other entity, as was the case in this project. It would appear that it has taken 3 years of preparation and only now is the project really taking off.

5. The ICD seed program lacked an adequate level of demand for its services to utilize effectively the grant funds that were disbursed in the first three years of the project, but this problem seems to have ended. Its relationship with the United Nations network was the principal source of business during its initial years and probably did more to utilize effectively AID's grant funds than any AID initiated activities. Likewise, a more vigorous promotion program within AID would probably have been cost effective.

6. The project took a definite shift toward policy assistance which was justified, given the conditions in the countries in which it operated.

7. The project has fallen far short of its training objective, which is

a major shortcoming of the project. The difficulty seems to have been linked to the overall lack of understanding of the project in the field, and hence the lack of demand for its training services. It would appear, however, that the ICD still has some network building among seed companies to accomplish for its internship training program.

8. The ICD has been highly successful in gaining credibility in the seed industries of both developed and developing countries. Developed countries perceive it as independent from multinational companies and multinational seed companies perceive that the ICD has a private sector/commercial orientation to seed problems in developing countries.

9. The ICD has been successful in obtaining the services of highly qualified seed experts and providing high quality services to the activities in which it has been involved under the project.

B. Recommendations. The evaluators would make the following general recommendations:

1. AID should require that there be a closer relationship between the ICD seed program and the Mississippi State University seed project. This could be accomplished by first having S&T/ACR and MD better coordinate their efforts and then by having MSU and ICD regularly meet to discuss possible collaborative activities. MSU noted in interviews with the evaluators that they found ICD's assistance valuable and that the commercial management aspects of seed industry development are important. MSU does not have the expertise of the ICD in this area and the two entities should work in greater concert to exploit their complementary areas of specialization. In both Tanzania and Thailand the value of the two groups working together has already been demonstrated, yet there is no formal mechanism to ensure that it will be repeated.

2. The internship training program needs to be revised to more adequately meet the objectives of training senior seed officials in LDCs. The ICD should develop a specific orientation program for seed companies which establishes specific training objectives and a commitment on the part of the companies to provide capable personnel who will have the specific responsibility to train, as well as a better scope of work of what is to be accomplished during the internship. Also, more care needs to be given to the circumstances in which interns are placed, including lodging, social activities, and transportation.

3. With the accelerated demand for its services, the ICD will have to create some criteria to prioritize requests. Several of these should be: (i) the political strength of the institution with which the ICD would work, to avoid a repeat of the lost time under the CRC/Caribbean experience, and (ii) a demonstration of a serious intent by the government of the country involved to operate its seed industry on a commercial basis. Considerable effort can be lost under the project, if the policy base necessary to operate a commercial seed industry cannot be established because of the lack of political will. This was a major finding of the ICD in its initial phases of operation and should be a guide to its future activities.

4. Future projects which are valuable but not easily appreciated by AID missions should contain a more vigorous promotion element. Reliance upon informational cables to missions and meetings with technical backstopping offices in AID/Washington regional bureaus is not sufficient.