

INTERIM EVALUATION

**BASIC FOOD CROPS
No.695-0101**

PROJECT EVALUATION STATEMENT

BUJUMBURA, BURUNDI

February 23 to March 2, 1982

13. SUMMARY-This evaluation report results from a one-week visit to Burundi during which time the 3 person-team visited the project site, the Gisozi Research Farm and conducted a series of interviews with appropriate personnel. The team concluded that the project, which was authorized in FY 1980, after getting off so a slow start should now move more smoothly toward achieving the outputs. The team noted several positive accomplishments to date including the production of 11.5 tons of wheat seed in calendar year 1981 and the development of a green manure and liming program which partially addresses the unfavorable acidic and aluminum toxicity soil conditions. Problems noted included delays in construction of physical facilities and in the provision of professional assistance and a probable cost overrun for AID/GRB in meeting project objectives. Recommendations incorporated into this evaluation fall into 4 general categories:

- A. Distribution of the 1981 wheat seed crop (No.8).
- B. Management of the operating seed farm inducing development of annual farming plans and installation of equipment (No.4, 5, 6, 7, 9, 11).
- C. Development of farmer beneficiary evaluation baselines (No.10, 12).
- D. Refinement and additions to the project budget (No.1, 2, 3).

Also included are a series of special comments (see section 23) intended as guidance for project management.

14. EVALUATION METHODOLOGY - What was the reason for the evaluation, e.g., clarify project design, measure progress, verify program/project hypotheses, improve implementation, assess a pilot phase, prepare budget, etc.? Where appropriate, refer to the Evaluation Plan in the Project Paper. Describe the methods used for this evaluation, including the study design, scope, cost, techniques of data collection, analysis and data sources. Identify agencies and key individuals (host, other donor, public, AID) participating and contributing.

This evaluation was performed to assist the AAO and GRB to improve its implementation actions. The evaluation was also used as a means to validate project outputs and to refine future budget requirements. The procedure used in the evaluation was to visit the project site, review the AAO files, interview the following AAO staff, project expatriate contract personnel, host country project personnel, host country management personnel and personnel from affected other donor organizations:

**I. Government of the Republic of Burundi:
Ministry of Agriculture and Livestock, Department
of Agronomy:**

- M. Vital Baranyitondye, Director of Agronomy
- M. Novat Niyungeko, Project Coordinator
- M. Pegase Banyankiye, Chief Cereals Group
- M. Fabien Siboniyo, Chief, Tubers and Legumes Group

Gisozi Research Station:

- M. Reverend Ntukamazina, Chief, Wheat and Triticale Program
- M. J. J. Schallbroeck, Ing. Ag., Chief Division of Wheat and Triticale
- M. Z. Zachana, Chief Bururi Seed Selection Farm
- M. Bonte, Project Manager, Seed Selection Unit

II. Contractor:

- John McAlister, Chief of Project
- John Ernotte, Engineer and Farm Machinery Specialist

III. Other:

- George T. Bliss, AID Affairs Officer
- Abbe Fessenden, AID Program Officer
- Harold E. Fisher, Basic Food Crops, Project Manager, Agricultural Development Officer
- R. M. Kebrom, Controller
- Samson Ntunguka, Assistant Program Officer, AAO/Burundi
- M. Francis De Clerck, FED

This information, taken together with the PP, the first annual GRB project report, controller records and other AID project documentation, formed the basis of the evaluation performed by C. Martin, Agricultural Development Officer, REDSO/EA, D. Dijkerman, Agricultural Economist, REDSO/EA and J. Graham, Project Officer, REDSO/EA.

15. EXTERNAL FACTORS - Identify and discuss major changes in project setting, including socio-economic conditions and host government priorities, which have an impact on the project. Examine continuing validity of assumptions.

Three major assumptions made in the PP have not held true, which nevertheless had no significant impact on the project.

First, the European Development Fund (EDF) extension project which was intended to distribute the pure seed from the Kijondi farm has not materialized as planned. This is not a problem since the

Department of Agronomy's Seed Selection Unit, which has the experience and capability, will be assuming the FED's responsibility for distributing the seeds. Second, the construction of the seed farm is not proceeding according to the PP implementation plan. The 18 month delay resulting from the difficulty in determining acceptable bidding procedures has been the major contribution to an increase in the total estimated life of project cost. This is detailed in the inputs section below. Third, the technical assistance has not arrived on a timely basis as envisaged by the PP. However, because of the construction delays, the advisors are essentially "in phase" with the rest of the project.

16. INPUTS - Are there any problems with commodities, technical services, training or other inputs as to quality, quantity, timeliness, etc.? Any changes needed in the type or amount of inputs to produce outputs?

I. AID:

Most of the project inputs -- commodities, technical services, participant training -- are poised for rapid implementation. Three participants are being processed (Feb. 1982) to depart for training and another three will proceed in late 1982. The construction of the farm has been delayed, although this has not resulted in problems as other project inputs have also arrived later than planned. Construction delays have resulted in the possible requirement of an extra five percent of the LOP cost to enable the project to attain its objectives.

Table 1 summarises the project budget and provides an estimate of remaining needs. Major PP underestimations (column 3) were "Construction" and "Other costs". Construction costs were higher due to delayed contract awarding, inflation of materials and the necessity to construct a two story seed processing facility which was not foreseen in the PP. The "Other Costs" not estimated in the PP were outlays for farm equipment maintenance and rental costs and the purchase of livestock to supply the farm with manure. Major PP overestimations to date were "technical assistance" and "farm equipment" due to problems in hiring appropriate personnel and procurement problems.

By the end of 1982 the project is expected to have obligated US\$4.12 million, leaving US\$1.338 million to finance the remaining activities. These activities have been estimated to cost a total of US\$1.618 million (column 5). Thus, on the basis of the evaluation team's analysis, project could require an US\$280,000 or five percent of the project LOP to enable it to achieve the project purpose. AAO/Burundi should prepare for this situation in its future budget requests.

The major remaining cost areas (see column 6) are "Technical Assistance" and "Other Costs". Overall technical assistance will absorb a major amount of the remaining requirement due to the

TABLE I - BASIC FOOD CROPS: BUDGET ANALYSIS

	AAO/Burundi estimated obligations to end FY82	FP estimated obligations to end FY 82	AAO/Burundi estimates minus FP estimates	FP LOP Total	FP LOP TOTAL minus AAO/B estimated obli- gations to end FY 82	Projected AAO/B requirements FY 83-85
	(1)	(2)	(3)	(4)	(5)	(6)
.....in U.S.\$.....						
A. Technician's Assistance	848,200	930,900	-82,700	1,515,00	+ 666,800	625,000 ²⁾
B. Participants' training	114,815	99,600	+15,216	106,600	- 8,215	4,000 ³⁾
C. Capital investment:						
- Construction	1,409,300	654,500	+754,800	654,500	- 754,800	350,000 ⁴⁾
- Commodities, vehicles, furniture	306,326	289,400	+ 16,926	289,400	- 16,926	75,000 ⁵⁾
- Farm equipment	535,900	613,00	- 77,100	613,000	+ 77,100	100,000 ⁶⁾
- Seed processing equipment	114,750	155,800	- 41,050	155,800	+ 41,050	0
D. Other Costs ¹⁾	752,709	608,300	+144,409	856,200	+ 103,491	364,000 ⁷⁾
E. Contingency and Inflation	38,000	737,800	-699,800	1,267,300	+1,229,300	100,000 ⁸⁾
F. TOTAL	4,120,000	4,089,300	+ 30,700	5,457,800	+1,337,800	1,618,000

II. Estimated shortfall (column 6 - column 5): \$280,200 III. Revised total Project Costs(column 4 + shortfall): \$5,738,000

Footnotes:

1. FOL; fertilizer; agricultural chemicals; farm equipment maintenance and rental; livestock, research; and other miscellaneous costs.
2. Long term agronomist, 2 years: \$260,000; long term administrative assistant: \$65,000; short term consultants for 30 months \$300,000
subtotal \$625,000
3. Observation trips (i.e. to Kenya) \$4,000.
4. Remaining financing for seed processing building: \$50,000
estimated cost escalations: \$300,000
Subtotal: \$350,000
5. Vehicles: two pickups, one sedan: \$42,000
Spare: \$33,000
Subtotal: \$75,000
6. Tractors, three: \$75,000
Plows, three: \$ 8,000
Disk plow, three: \$ 8,500
Harrows, two: \$ 8,500
Subtotal: \$100,000
7. FOL: \$60,000
Vehicle, farm equipment maintenance: \$100,000
Office supplies: \$5,000
Housing maintenance: \$15,000
Operational research: \$60,000
Operational travel: \$10,000
Administration costs: \$5,000
Plant protection: \$100,000
Fertilizer: \$270,000
Subtotal: \$575,000* Total includes approximately US\$211,000 additional GRB requirements. * AID will require an additional US\$364,000.
8. Estimated contingency and inflation.

large numbers of short term and long term consultant services remaining to be funded. The "Other Costs" category is expected to rise because of inflation and other costs not estimated in the PP (i.e. farm equipment rental. The 18 month delay is estimated to cost the GRB US\$211,000, in unplanned additional project outlays which it should budget for. The primary reason for the expected cost increase to the GRB is because the revenue from the sale of the seed farm's output is expected to be insufficient due to the delay in implementation to allow the GRB to cover its increased share of the farm's operating costs as planned in the PP.

Recommendations:

1. AAO/Burundi should plan to request additional funding for the project. The combined additional GRB/AID funding required for the project is estimated at US\$491,000. The total AID additional funding required will be approximately US\$280,000.

2. Given the size of the project (LOP of US\$5.5 million) the participant training component is quite small (US\$106,000 and mostly short term). Thus it is recommended that any "fall out" should be channelled with a priority to increase participant training. One particular area which may need additional support is the training of Burundians to maintain the farm's equipment. If money is tight, any excess short term consultancy resources could be utilized to finance training courses.

3. Because the project has ordered and already received most of its commodities, the project management should immediately begin to order replacements and spares. The Agricultural Engineer/Farm Machinery Specialist should take part in determining the spare requirements, particularly for the vehicle fleet.

II. GRB Inputs:

The GRB has provided a total of FBu 12,993,389 in cash, equivalent to US\$145,096, during the first two years of the project. This amount is in addition to the provision of the land valued at US\$670,000 as well as initial land clearing valued at US\$94,900. The GRB's 1982 budget is FBu 32,400,000, equivalent to US\$361,809, which includes FBu 13,000,000 or US\$145,170 representing the taxes payable on the construction contract. Realizing that the Burundian and American budget years do not coincide, nevertheless the Burundi contribution has exceeded that amount projected in the Project Paper (p.43) of US\$102,900 for the first two years of the project. The third year budget (1982) of FBu 19,400,000, equivalent to US\$216,639, also exceeds the amount projected in

the PP (US\$107,500) though includes provision for only FBu 1,900,000 or US\$21,217 for transport (fuel) instead of US\$35,500.

Total GRB contributions to date are:

Imputed value of land	\$ 670,000
Imputed value of land clearing	94,900
Resettlement (included in annual budget)	-
Office equipment/furniture	15,100
Imputed value of Drawings/Plans	26,700
Imputed value of construction supervision	39,300
Soils tests	2,000
1980 Annual Budget	23,669
1981 Annual Budget	<u>103,904</u>
TOTAL	\$ 975,573

The reason for this higher than projected contribution by the GRB is twofold: the Department of Agronomy desire to get the project off to a prompt start by starting operations in 1980 without long term technical assistance thus incurring early start-up costs and, the cost of casual labor funded by the GRB was not included in the PP calculations. It should also be noted that no building maintenance has occurred in FY 81 or will occur in FY 82 as construction is still underway. Present estimates suggest that the GRB contribution will need to rise to approximately FBu 35 million in 1983 and above FBu 40 million in 1984 and 1985 (note that the recurrent cost analysis in the PP did not include inflation).

17.OUTPUTS:- Measure actual progress against projected output targets in current project design or implementation plan. Use tabular format if desired. Comment on significant management experiences. If outputs are not on target, discuss causes (e.g., problems with inputs, implementation assumptions). Are any changes needed in the outputs to achieve purpose?

The project outputs will be discussed as listed in the logical framework of the Project Paper, Annex B.

I. Physical facilities for seed farm: - The Government of the Republic of Burundi (GRB) has provided an area near Kajondi of about 400 hectares. The site is located at almost 1 750 meters, on acid soils and accessible by passable roads. Construction of the physical facilities is behind schedule by approximately 18 months as the PP implementation plan called for construction to start in June 1980. As of the time of this evaluation, construction of the physical facilities has only commenced on 1 January 1982 for

the living quarters, storage shed, fertilizer storage, livestock barn, with the architectural contract to design the seed processing facility being advertised during January 1982. The project manager is planning to start actual construction of the seed processing facility in late 1982.

Recommendation:

4. AAO/Burundi should follow through with its plan of requesting a monthly visit by an engineer from REDSO/EA to review the workmanship of the construction during all phases of the construction period.

II. Seed farm operated by trained GRB personnel:-
The professional services of the Project Manager/Agronomist, Agricultural Engineer/Machinery Specialist and Administrative/Logistics Officer were planned to be on site as of September/October 1980. However, the Agricultural Engineer/Machinery Specialist arrived on duty in April 1981. The Project Manager/Agronomist arrived during January 1982 and the Administrative Logistics Officer has not arrived at post at the time of this evaluation. The Agricultural Engineer/Machinery Specialist has been on duty for eleven months despite the fact that the farm and seed processing equipment and handtools are just now arriving in country. The evaluation team suggests that the specialist has been employed prematurely since the team could not locate any project supplied farm or seed processing equipment at the site, and the only project supplied commodities being utilized are vehicles.

The Department of Agronomy, MOA and L, has assigned a professional staff of ten to the project (See First Annual Report dated December 1981). In addition there are about 150 casual laborers employed on this farm to conduct the farming operations. The team believes that the MOA has met the project's present needs in terms of professional and casual labor in an adequate and timely fashion.

Recommendation:

5. AAO should continue the processing of the applicant for the Administrative Logistics Officer in order to complete the contract staff to implement the project.

6. AAO should explore possibilities of providing additional equipment maintenance training courses to the Burundian maintenance personnel and of expanding the farm's Burundian maintenance staff.

III. Quantities of seed/plant materials produced:-

The seed farm has to date produced only one crop for seed of the following cereals and legumes: wheat, maize, buckwheat and lupine. According to the first GRB Annual Report of the seed farm, 11.5 tons of Romany seed wheat has been produced. Seven and one half tons of this seed has been provided to the Seed Selection Unit of the Department of Agronomy for distribution with the remaining tonnage stored on the Kajondi farm for farm use and local distribution. The twenty hectares planted to maize did not produce seed of sufficient quality to be distributed to farmers. Consequently, the maize crop was sold to adjacent farmers for livestock feed. The farm produced about 350 kilograms of buckwheat seed which was used to plant a second crop. Part of the second crop will be for seed and part will be a green manure crop. In addition, there have been about 673 kilograms of lupine seed produced which was utilized by the farm to produce a second seed crop. Lupine is grown as a seed/green manure crop to complement the buckwheat green manure program.

Recommendations:

7. AAO, Contractor and the Department of Agronomy should develop an annual farm plan setting forth the amount of hectares and planting times needed for the seed production of green manure crops, wheat, maize, legumes and pulses, Irish potatoes, sweet potatoes and the amount of hectares to be planted to green manure crops for plowing down.

8. AAO, Contractor and Department of Agronomy should develop an alternative plan to the European Development Fund (FED) for distributing to farmers the pure seeds produced at Kajondi seed farm. The evaluation team suggests that the Seed Selection Unit for the Department of Agronomy be considered as an alternative institution for distribution of pure seeds to farmers in the twenty high altitude wheat growing communes. This Unit has been operating for a number of years throughout the country and has established linkages with the Commune chiefs and the Commune level extension services, hence it is in a good position to fill the gap created by the delay in negotiation of the FED extension program. In any case, the evaluation team has been advised that the Seed Selection Unit will assume direct responsibility for distributing the first year's wheat seed produced at the seed farm.

IV. Production Techniques Developed:- At the time of this evaluation, the team found little evidence that any action has been taken to achieve this stated output. The primary constraint to achieve the output has been the lack of a formal agreement between the GRB and the FED program. Secondly, the delay of fifteen months in contracting for the

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NO. 10

19. GOAL/SUBGOAL- Quote approved goal, and subgoal, where relevant, to which the project contributes. Describe status by citing evidence available to date from specified indicators and by mentioning the progress of other contributory projects. To what extent can progress toward goal/subgoal be attributed to purpose achievement, to other projects, to other casual factors? If progress is less than satisfactory, explore the reasons, e.g. purpose inadequate for hypothesized impact, new external factors affect purpose-subgoal linkage.

It is too early to evaluate whether or not the project is presently contributing to the achievement of the project goal "to improve the nutrition intake and economic status of the people of Burundi" or the subgoal "to improve the nutritional intake and income of subsistence farmers in the target tea production zones". To date, there are no indications that the project, as being implemented, will not contribute to the achievement of these goals.

20. BENEFICIARIES- Identify the direct and indirect beneficiaries of this project in terms of criteria in Sec. 102(d) of the FAA (e.g., a. increase small-farm, labor-intensive agricultural productivity; b. reduce infant mortality; c. control population growth; d. promote greater equality in income; e. reduce rates of unemployment and underemployment). Summarize data on the nature of benefits and the identity and number of those benefitting, even if some aspects were reported in preceding questions on output, purpose, or subgoal/goal. For AID/W projects, assess likelihood that results of projects will be used in LDC'

The beneficiary analysis provided in the Project Paper would appear to remain valid as there has been insufficient progress in implementation which could suggest that a different set of beneficiaries is evolving. It should be noted that the Seed Selection Units plans to perform relative socio-economic surveys of farmers benefitting from the distribution of its seeds including the 7.5 tons of wheat seed provided by the Kajondi Farm.

Recommendation:

12. That the AAO office monitor the Seed Selection Unit findings and work either with the FED or on its own to assure that evidence is produced, possibly using University of Burundi staff and graduate students under contract, which can be used to determine both the number of beneficiaries and the impact of the project on those beneficiaries.

21.UNPLANNED EFFECTS - Has the project had any unexpected results or impact, such as changes in social structure, environment, health, technical or economic situation? Are these effects advantageous or not? Do they require any change in project design or execution?

To date, the project has not progressed far enough to determine if there are any unplanned effects. The PP analyses still appear to be valid in their assessment of the project environment.

22.LESSONS LEARNED- What advice can you give a colleague about development strategy, e.g. how to tackle a similar development problem or to manage a similar project in another country? What can be suggested for follow-on in this country? Similarly, do you have any suggestions about evaluation methodology?

The evaluation team believes it is too early to determine if any useful lessons have been learned.

23.SPECIAL COMMENTS OR REMARKS- Include any significant policy or program management implications. Also list titles of attachments and number of pages.

The evaluation team wishes to make a number of suggestions to the AAO, Contractor and the Department of Agronomy that we believe will improve the management of the project. If the project is to be successful, we believe Kajondi Farm's management is critical. In this regard the Contractor and the Department of Agronomy will need to consider:

I. Timely planting dates of cereal and legume seed and green manure crops. We suggest the contract project manager and the seed farm production chiefs of the cereals and tuber and legume crops conduct a survey of farmers adjacent to the Kajondi Seed farm to determine the optimum planting dates for indigenous crops grown, commonly followed cultural practices, crop rotation patterns, soil fertility practices and local crop varieties being used.

II. Modifications in the contour lines as presently laid out on the farm. The existing drainage contours are installed improperly. It is suggested that the farm be surveyed again with the new contour lines staked out following the natural gradients of the land.

III. Continuing the practices of taking a yearly Ph and acidic soil tests to determine if the soil management of liming, green and animal manure practices program are actually affecting the soil Ph levels. The practice of yearly soil tests should also include an evaluation of the aluminum toxicity problem found on the Kajondi Seed Farm.

IV. Specification of the FY 1982 wheat seed distribution system. We recommend that AAO/Burundi and the Contract team work with the Seed Selection Unit to determine and write exactly how the 1982 wheat seed crop is to be distributed. Included should be a discussion of responsibilities, areas for distribution, numbers of farmers, price at which the wheat seed is sold, etc. This task should be completed within the next 45 days because the 1982 wheat planting will be in full swing by then. AAO should then follow-up the distribution with a brief evaluation of the operation and the potential usefulness in future years.

V. Pursue alternative seed distribution options. Because the FED project has not materialized as assumed in the PP and ProAg, we recommend that AAO/Burundi actively pursue other options of seed distribution to ensure that the farm's seed is utilized.