CLASSIFICATION

PROJECT EVALUATION SUMMARY (PES) – PART I

1. PROJECT TITLE	2. PROJECT NUMBER	3. MISSION/AID/W OFFICE
BASIC FOOD PRODUCTION AND MARKETING	511-0451	BOLIVIA

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 No. 1 each FY) 79-2

☒ REGULAR EVALUATION ☐ SPECIAL EVALUATION

5. KEY PROJECT IMPLEMENTATION DATES			6. ESTIMATED PROJECT FUNDING		7. PERIOD COVERED BY EVALUATION
A. First PRO-AG or Equivalent	B. Final Obligation Expected	C. Final Input Delivery	A. Total	$ 6,900,000	From (month/yr.) July 1978
FY 1975	FY 1981	FY 1982	B. U.S.	$ 6,900,000	To (month/yr.) July 1979
					Date of Evaluation Review January 16, 1980

8. 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., airgram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
1. That extension activities be deleted from this project and that the extension team member be replaced by an additional research technician.	R.J. Peters	Sept. 1979
2. That an individual assessment be carried out to measure qualitative inputs of CID technicians.	R.J. Peters	Dec. 1979

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

- ☐ Project Paper
- ☐ Financial Plan
- ☐ Logical Framework
- ☒ Project Agreement
- ☐ Implementation Plan e.g., CPI Network
- ☒ PIO/T
- ☐ PIO/C
- ☐ PIO/P
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

- A. ☐ Continue Project Without Change
- B. ☐ Change Project Design and/or
- ☒ Change Implementation Plan
- C. ☐ Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER CONCURRING PARTICIPANTS AS APPROPRIATE (Names and Titles)

RDD:DChaij (telephone) [illegible]
DPE:ARuiz de Zambrana [illegible]
DD:MHButler [illegible]
Richard J. Peters, Project Manager

12. Action AID/W Office Director Approval

Signature [illegible]

Typed Name Abe M. Peña, Director

Date 1/16/80

AID 1330-15 (3-78)

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13. SUMMARY

The Consortium for International Development (CID) Contract, financed through funds of the Basic Foods Production Project, was initiated in 1975 and will continue through 1982. Since the project began CID has completed nearly 30 person years of applied research and teaching activities. The project paper proposed 10 advisors per year or 40 person years for the 4 year period. Thus CID has complied with 7% of the contract in the four year period. In the past year CID has provided 8.3 person years as compared to a contracted 10 person years or 83% of the requirement.

At the present time, 9 out of 10 programmed technicians are in-country working with IBTA in Cochabamba, Santa Cruz and La Paz. These technicians are primarily involved with technology development in the field of agriculture. Some work is also being carried out in technology extension, and as a result, research information is now beginning to become available to the Bolivian small farmer. Plant virus and nematode resistant seeds are becoming available to potato farmers and corn growers are beginning to use improved varieties which will produce 25% higher yields.

Technology transfer from CID to the IBTA staff (i.e. institutionalization) is the most important objective of this contract. In each instance where a CID technician has worked directly with a host country technician it is assumed that the host country technician has learned something about agricultural research which will enable the Bolivian technician to improve research quality in the future. An evaluation of individual CID technician is needed to verify this assumption.

A major problem continues to be the lack of identification of priority research for the small farmer. Much research is still based on traditional approaches to station research such as variety trials. CID is attempting to change this traditional approach and a survey is being conducted to determine farm systems for small grains in the Cochabamba area. Similar surveys are underway and expected to be completed soon. The program will also benefit from similar research now being carried out in the Santa Cruz area by the economist attached to the British Tropical Mission, who is working closely with the research program in Santa Cruz.

Difficulties have also been encountered in the orientation of experiment station leaders. Because the national IBTA budget is limited and because station management can sell experiment station cropping for profits the station managers often place their priorities on commercial production rather than on research. These profits are then used by the experiment station to improve research facilities. While this orientation has impeded research on experiment stations it has also encouraged researchers to increase research on the farmers field.

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As can be seen from the output section of this evaluation the technology development section of this program has far exceeded goals in every case excepting improved curriculum and new courses for the universities.

Output in technology extension, however, has been very poor because the extension service has not yet been properly designed, financed and equipped to carry out its part of the program.

14. Evaluation Methodology

This evaluation is a regularly scheduled annual evaluation. The evaluation was carried out by the project manager through field visits and through review of the individual and quarterly reports of the Consortium for International Development. Parts of the evaluation are also based on a review of the scope of work carried out by Dr. Edgardo Moscardi, CIMMYT Economist, Dr. Richard Swenson, Utah State and Dr. Antonio Turrent, Agronomist, College of Post Graduate Studies, Chapingo, México.

15. External Factors

The assumptions for this project (attached) remain valid to a sufficient degree to justify continuation of the program. Serious questions that need to be considered regarding the assumtions are:

a) COB Policies will motivate small farmers to produce more. This assumption affects the sector and sub-sector goal.

Within the agriculture sector program there are several specific incentives to increase production for the small farmer. A major incentive is the agricultural credit being made available for the small farmer. However, this credit is reaching only 4 percent of Bolivia's farm population. Unfortunately, very little is being done to help the small farmer develop access to markets which are so crucial to the success of this type of project.

b) There will be no major downturn in economic conditions and favorable cost-price relations for agricultural products will prevail.

While there may not have been a major downturn in the economy and while cost price relations seem to have prevailed, the government has created a larger than normal risk factor and as a result "caution" by the small farmers has been the general t...

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This has had little negative effect on the small farmer's operations, but it has not resulted in measurable positive advances.

The budget of MACA and IBTA for FY 1978 was not increased because of increasingly severe economic problems of the GOB. As a consequence a reduction in the budget has taken place due to inflation.

c) That climatic conditions will be favorable. Potato yields in many parts of Bolivia will probably be down this year because of too much rain. Soybean, corn and small grain crops will probably benefit from the heavy rains except in the flood zones of streams and rivers.

d) That farmers in target areas will have access to adequate credit.

The small farmer credit program has proceeded rapidly and funds allocated in AID Project # 511-T-053, Agriculture Sector I, were disbursed about a year ahead of schedule. Even so, the number of farmers affected is only about 1% of the estimated total number of farmers in the target area.

Several technology development output assumptions have also not proven to be completely fulfilled.

e) "University professors agree to cooperate with MACA and advise in conducting studies".

Few university professors have agreed to cooperate with MACA and CID in conducting studies. (See 2I Unplanned Effects).

f) "That Universities agree to implement revised, improved curricula".

The university professors have not been enthusiastic about receiving this type of assistance from CID technicians.

Finally, one assumption with regard to inputs:

g) "That AID, GOB and other donors resources will be provided as proposed". Has probably caused more frustration than the failure or partial failure of any other single assumption.

The building program scheduled under Agriculture Sector I is supposed to provide facilities at 4 agricultural research stations in the target area. A seed processing center is supposed to be built at Warnes in the target area. Agricultural service centers

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are to be built in Santa Cruz, Sucre and Cochabamba. Delays in beginning construction have continued so that today, 4 years after loan signature, the construction for most facilities is only beginning. Delays were caused by bureaucratic breakdowns in the Ministry of Agriculture in dealing with problems of building design, land titles and contracting procedures.

Commodity procurement which was to support the agricultural research and extension program has progressed much faster than construction. Even here, however, several key commodities, such as audio visual equipment for extension and tools for the experiment station are just arriving. Again the delays occurred because the Ministry of Agriculture has often not been able to cope with procurement procedures on a timely basis.

16. Inputs

There have not been any significant problems with regard to inputs except with regard to timeliness of construction and commodity procurement as mentioned in the previous section (15. External factors).

17. Outputs

Outputs, as listed in the log frame, have proceeded fairly well on target as presented in the following table:

1. Technology Development	Cum Goal	Cum Total Accomplished	1979 Goal	1979 Accomplishments
a. Research studies on crops and livestock production problems in the small farm sector.	96	205	24	70
b. Research studies conducted in collaboration with professors of San Simon and Gabrial René Moreno universities.	16	41	4	39

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	Cum Goal	Cum Total Accomplished	1979 Goal	1979 Accomplished
c. Survey projects in agriculture at the universities of San Simon and Gabriel Rene Moreno related to production problems in target areas.	16	41	4	[illegible]
d. Studies recommending improved University Curriculum.	4	2	2	1
e. New or substantially improved courses.	8	1	4	[illegible]
f. Division of Research and University personnel trained				
1. M.S.	20	[illegible]	4	[illegible]
2. PhD.	2	2	0	[illegible]
3. In service training	150	[illegible]	40	[illegible]
4. Short term courses	80	[illegible]	20	[illegible]
g. Students trained by advisor in formal university courses in Agronomy, Horticulture, plant and Animal Science, and Agricultural Economics.	960	[illegible]	240	
2. Technology Extension				
a. Field demonstrations on variety trials, improved management practices and other research results.	[illegible]	[illegible]	8	[illegible]

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	Cum Goal	Cum Total Accomplished	1979 Goal	1979 Accomplished
b. Short courses for campesinos on research results, improved management practices, use of credit, farm management techniques, fertilizers, equipment, etc.	120	15	30	5
c. Research and extension bulletin distributed in target areas.	192	70	48	[illegible]
d. Department of Extension personnel trained:				
1) M.S.	6	3	2	[illegible]
2) PhD	0	0	0	[illegible]
3) In service training	120	40	40	[illegible]
4) Short term courses	60	20	20	[illegible]

Sectoral management outputs are deleted because this subject eliminated from the project agreement as recommended in 1978 by the Mascardi, Tarrant and Svenson report.

The quantitative output is fairly impressive, but a qualitative evaluation of individual technician also should be made.

18. Purpose

1. Technology Development: "To develop improved technologies now used by the small farm sector of the inter-mountain valleys of Central Bolivia and the eastern agricultural lands".

a. "A set of improved technologies that resolve basic production problems in the target areas and specific recommendations for adopting these at the farm level in target areas".

As a direct result of research on the experimental stations IBTA can now make several recommendations to the small farmer. Potato growers are now being instructed on phosphorus and nitrogen level applications by the Extension Service. These applications can be geared to the varied weather factors encountered in the growing season, which reduces the risk factors that the farmer must take.

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As a result of intensive research with soybean, rice and corn varieties new seeds are now being produced and these will be made available to small farmers in the Santa Cruz area.

There is still a lack of adequate technology which addresses the small farm system in its entirety. There has been some research into inter-cropping, but much more emphasis needs to be placed on this type of research in the future. Various CID technicians are looking at the small farmer system and attempting to identify constraints which will require priority research.

b. "Three regional agricultural research stations located in the target areas staffed with 10 trained bolivians planning, executing, and managing research programs relevant to specific problems".

A total of eight M.S. trained Bolivians are assigned to the experiment stations of the target area.

The three agricultural experiment stations in the target area, Saavedra, Toralapa, and San Benito, are staffed as follows:

The Saavedra station in the Department of Santa Cruz has 8 technicians trained to the engineer level. One of these is currently studying for an M.S. degree at New Mexico State University in Las Cruces. The San Benito station is directed by an M.S. level technician with other staff training at CIMMYT. An additional 10 trained technicians are assigned to the station. At Toralapa the station manager has an M.S. degree and an additional 5 technicians have been trained or are in training to the engineer level.

c. "The MACA research division with four trained Bolivians, identifying critical problem areas requiring research as evidenced by the number and types of problems proposed for research".

The head office of IBTA in La Paz has sufficient trained personnel. Unfortunately, the leadership of IBTA is quite inadequate and CID and MACA have not yet been able to reach agreement on a technician to work at the national level. The difficulty in staffing this position arises from the recruiting problems in the U.S. and from IBTA's sensitivity concerning the type of person to fill this position.

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d. "Two universities involved in researching critical regional production problems and offering expanded agricultural programs more directly related to Bolivian requirements".

The schools of San Simon in Cochabamba and Rene Moreno in Santa Cruz are involved in some research. Their direct participation with IBTA and CID has been disappointing. Part of the problem is caused by the fact that both schools have had extended closures for political reasons. Further problems are caused by a basic antagonism between IBTA and the universities about roles each should play in agricultural research. University participation through student scholarships has, however been beyond expectations. (See outputs). Finally, the CID technicians are often so busy with field work they do not make the necessary effort to work within the university system.

2. Technology Extension "To extend to small farm operators in target areas the improved technologies and more modern practices."

a. "Central MACA extension service staffed with four trained extension programmers, developing and planning and executing improved extension programs."

The central office of IBTA extension is currently staffed with 3 people. The director of extension, the director of communication and one assistant. According to a study carried out by Dr. Howard Ray, Academy for Educational Development, in October 1978, the extension program remains woefully inadequate. It is apparent that little, if any, extension planning is carried out at the national office level. USAID is attempting to improve this through a specific extension project to be developed in 1979-80.

b. "Three extension centers located in the target areas (Cochabamba, Sucre and Santa Cruz), staffed with 40 additional trained agents and 10 subject matter specialists, planning executing and managing regional extension programs."

The construction of the three agriculture service centers, delayed for three years, will begin in May 1979. Construction schedules indicate that all centers will be physically completed by May 1980.

c. "Extension agents conducting at least 3 training programs per year for farmers in each of the project areas."

Extension agents currently are working on a one-to-one basis. The new CID extension advisor arrived in January 1979 and has not emphasized the training aspect of extension.

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d. "MACA Extension Division extends results of research studies to at least 20% of farmers in target areas or 6,500 farmers by 1979".

The CID advisor estimates that the extension agents are directly contacting approximately 100 farmers each. There are 37 extension agents in the target area meaning that only 3,700 farmers are being reached directly with new technology.

e. "Recommended technologies actually accepted by at least 60% of the farmers in target areas or 16,500 farmers by 1979."

The number of farmers accepting new technologies is difficult to estimate without an appropriate survey. Various surveys are being carried out by USAID and MACA and these should give some indication of new technology impact once they are completed. This information will be available for the next annual evaluation. However, as only 3,700 farmers are presently reached by extension agents, it is probable that only 10 to 20% of the goal was reached.

f. "Annual sales of fertilizers to small farmers in target areas increase by 300% by 1982."

See "e" above.

g. "Distribution of improved seed by MACA among small farmers increased by 300% by 1982."

Total average distribution of improved seed by MACA has approximately increased by 19% since project inception in 1975.

Wheat seed distribution has decreased by 44% probably because of less interest in wheat production. Oat seed distribution has remained about the same since program inception.

The seed distribution program is plagued with the following problems:

1) Lack of an adequate marketing policy.
2) Lack of liaison between the credit program and improved seed
3) Lack of an integral plan related to the various institutions
4) Lack of an adequate extension service.
5) The seed programs' reputation with farmers is poor because of inadequate production technology and control.

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h. "Purchase of modern agricultural equipment by small farmers in target areas increase by 100% by 1982."

See "e" above.

3. Sectoral Management (eliminated from this program).

19. Goal/Subgoal

Sector Goal: "To increase per capita income and standard of living of rural people."

No data is available at the present time. Once the farm policy surveys being carried out under AID Project # 511-0485 are complete, some evaluation will be possible.

Sub-Sector Goal: "Increased production and increased factor productivity of basic food crops and livestock produced in the small farm subsector of the inter-mountain valleys of Central Bolivia and the developing agricultural areas of the lowlands of Eastern Bolivia." Again, no data is available. Information should be available for next year from 511-0485.

20. Beneficiaries

The intended beneficiaries of this project are approximately 200,000 small farmers in the target areas of Cochabamba, Chuquisaca and Santa Cruz. The crops selected for research include potatoes, small grains, corn, rice, fruit, sorghum, peanuts, sunflower and soybeans. Some of these crops have been selected for research to directly assist the small farmer in his farm technology. These crops include potatoes, wheat, peanuts, corn and rice.

Improved technologies for the small farmer are beginning to become available. Indirect beneficiaries of this project are the IBTA technician counterparts. These technicians work with CID technicians and are developing new research and extension capabilities. These new capabilities should produce benefits to the Bolivian farmer in the form of continuously improving technologies.

21. Unplanned Effects

One of the objectively verifiable indicators for the purpose, technology development is, "two universities involved in researching critical regional production problems and offering expanded agricultural programs more directly related to Bolivian requirements."

Success in uniting Bolivian university professors with IBTA researchers in this common goal has not been very remarkable to date.

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This past year, USAID approved a separate counterpart budget managed by CID to pay scholarships to students while they prepare theses for their Ingeniero degree. In the Bolivian University system a student finishes his course work with a certificate, but must on his own time, develop a research thesis before receiving the "Ingeniero" degree. At present, approximately 30 students are enrolled in this program. As many as 5 students are working on their research thesis with each CID technician.

Hopefully the linkages established in this program will lead to a more productive relationship between the agricultural universities and IBTA researchers.

22. Lessons Learned

Agricultural research and extension in Bolivia were heavily supported by AID predecessors beginning in the late forties. Significant research results were obtained in that era and resulted in significant immediate benefit to the farmers of Bolivia. In the mid seventies, when this project was organized, the institution designed in the forties and fifties had fallen into a state of low morale and redundant work of little value to the Bolivian farmer. It was hoped that through the direct support of research and extension that immediate benefits would begin to flow to the farmer.

Possibly this project failed to perceive the low state to which the research and extension institutions had fallen and thus the expectation for immediate results were disappointing. Future projects of this type should deal with research and extension in separate programs and should give a lead time of 2-4 years for, not only development of research outputs, but also development of institutional capability to deal with agricultural research.

Once research is in a position to produce results the extension service must be examined in depth and organized in such a way that it can effectively reach the farmer. This means that the extension program requires much more help than the services of one technician and some training envisioned under this project.

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AID 1070-75 (1-74)
SUPPLEMENT I

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 1975 to FY 1981
Total U.S. Funding $5,642,000
Date Prepared: October 1, 1975

Project Title & Number: Basic Foods and Marketing - 511-11-190-364.6

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program or Sector Goal: The broader objective to which this project contributes: Sector Goal: To increase per capita income and standard of living of rural people.	Measures of Goal Achievement: Sector Goal: a. Per capita income of rural people in the small farm sector increases from about $45 in 1971-73 to at least $55 by 1982. b. The share of production of the small farm sector that is marketed increases from 47% to 61% by 1982. c. Production of agricultural crops and livestock produced principally in the small farm sub-sector increases at the rate of 4% per year in 1979-82 compared to only 1.9% per year during 1961-65 to 1971-73.	1. Goal Verification - MACAG State Rural Production and Consumption Survey. - Records of INC and SIDC. - Censuses, samples, and reports of INE. - Review of reports and special studies of contract advisors. - Data, reports, and special studies of MACAG offices of Planning, Economics and Statistics. - National account data of the Ministry of Planning (COMEPLAN).	Assumptions for achieving goal targets: 1. The GOB will provide essential public services for agricultural development. 2. Farmers will be responsive to incentive programs. 3. Government policies will motivate small farmers to produce more. 4. There will be no major downturn in economic conditions and favorable cost-price relations for agricultural products will prevail.
Sub-sector Goal: Increased production and increased factor productivity of basic food crops and livestock produced in the small farm sub-sector of the intermountain valleys of Central Bolivia and the developing agricultural areas of the lowlands of Eastern Bolivia.	Measures of Sub-goal Achievement: a. Production of key crops of the Central Valleys and Lowlands increases as follows: 1971-72 Prod. / 1982 Prod. Crop / metric tons / metric tons Wheat 52,563 / 108,171 Corn 280,307 / 428,870 Barley 69,400 / 94,303 Rice 73,824 / 123,131 Soybeans 1,933 / 27,709 Peanuts 7,560 / 15,758 Potatoes 710,000 / 1,243,346 Yuca 240,333 / 379,283 Vegetables a/ 191,533 / 236,960 Pork 18,000 / 29,018 Milk 114,000 / 147,615 Forages - / - Poultry - / - a/ Sweet corn, onions, tomatoes, and green peas.	2. Sub-goal Verification - MACAG State Rural Production Survey. - Review of reports and special studies of contract advisors. - Data, reports and special studies of MACAG offices of Planning, Economics and Statistics.	Assumptions for achieving sub-goal targets: 1. The GOB will provide essential public services for agricultural development. 2. Farmers will be responsive to incentive programs. 3. Government pricing policies will motivate small farmers to produce more. 4. There will be no major downturn in economic conditions. 5. That adequate markets exist and function properly to absorb increased agricultural production. 6. That climate conditions will be favorable. 7. That farmers in target areas will have access to adequate credit.

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AID 1020-2(11-73)

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 1975 to FY 1981
Total U. S. Funding 12,000,000
Date Prepared: [illegible]

Project Title & Number: Basic Foods Production and Marketing - 511-11-120-354.6

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS

Measures of Sub-goal Achievement: (Cont.)

Crop	Annual Rates of Growth 1971-73/1982	1963-65/1971-73
Wheat	7.48	0.80
Corn	4.34	0.20
Barley	3.12	2.63
Rice	5.34	5.78
Soybeans	30.51	-
Peanuts	7.61	2.65
Potatoes	5.76	3.0
Yuca	4.67	6.74
Vegetables	2.15	1.88
Pork	4.89	1.48
Milk	2.62	-

b. Yields of key crops increase as follows:

Crop	1973 Yields Kg/Hectare	1982 Yields Kg/Hectare
Wheat	821	1,544
Corn	1,260	1,788
Barley	697	934
Rice	1,643	1,643
Soybeans	1,611	1,611
Peanuts	1,204	1,204
Potatoes	6,567	11,500
Yuca a/	13,109	13,109
Vegetables	3,563 b/	3,563
Pork	32.4 c/	44.4 c/
Milk	7.8 c/	10.1 c/
Forages	-	-
Poultry	-	-

a/ Sweet corn; onions; tomatoes, green peas.
b/ 1970-72 data.
c/ Kg. per animal-dressed weight for pork.

Crop	Annual Rates of Growth 1971-73/1982	1963-65/1971-73
Wheat	6.52	3.95
Corn	3.40	.10
Barley	3.12	.37
Rice	0.	.94

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AID 1020-20 (11-73)

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 1975 to FY 1981
Total U.S Funding $5,642,000
Date Prepared: October 7, 1974

Project Title & Number: Basic Foods Production and Marketing - 511-11-190-364.6

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS

Measures of Sub-goal Achievement: (Cont.)

Crop	Annual Rates of Growth 1971-73/1982	1963-65/1971-73
Soybeans	0	-
Peanuts	0	.86
Potatoes	5.76	3.53
Yuca a/	0	2.02
Vegetables	0	1.33
Pork	3.20	-
Milk	2.62	-
Forages	-	-
Poultry	-	-

c. Land area in production increases as follows:

Crop	1971-73 Land Area Hectares	1982 Land Area Hectares
Wheat	64,059	79,059
Corn	219,000	239,850
Barley	100,567	109,267
Rice	44,963	74,963
Soybeans	1,200	17,200
Peanuts	6,250	13,050
Potatoes	108,117	108,117
Yuca	18,333	28,933
Vegetables a/	53,750 b/	66,506
Pork	555,555 c/	653,555
Milk	40,042 c/	40,042
Forages	-	-
Poultry	-	-

Crop	Annual Rates of Growth 1971-73/1982	1963-65/1971-73
Wheat	.90	4.55
Corn	.91	.10
Barley	0	2.24
Rice	5.25	4.279
Soybeans	30.51	-

a/ Sweet corn, onions, tomatoes, green peas.
b/ 1970-72 data.
c/ Kg. per animal-dressed weight for pork.

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AID 1020-2011-73

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 1975 to FY 1981
Total U. S. Funding $5,[illegible]
Date Prepared: [illegible]

Project Title & Number: Basic Foods Production and Marketing - 511-11-[illegible]-364.6

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
	Measures of Sub-goal Achievement: (Cont.) Crop — Annual Rates of Growth 1971-73/1962 — 1963-65/1971-73 Peanuts 7.61 — 3.54 Potatoes 0 — .52 Yuca 4.67 — 4.62 Vegetables[a] 2.15 — .54 Pork 1.64 — - Milk 0 — - Forages - — - Poultry - — - a/ Sweet corn, onions, tomatoes, green peas. d. Target group impact by the end of the three year disbursement period for the Agriculture Sector Loan I and by the end of the grant, T.A. Project. Present Estimate/Year — End of 3rd Year Loan Project — End of T.A. Proj. (198[illegible]) Gross off farm sales $250 — $600 — $1,000 Per family income 225 — 350 — 580 Per capita income 45 — 70 — 116		
Project Purpose: 1. Technology Development: To develop improved technologies for use by the small farm sector of the intermountained valleys of Central Bolivia and the Eastern agricultural lands.	Conditions that will indicate purpose has been achieved: End of project status 1. Technology Development a. A set of improved technologies that resolve basic production problems in the target areas and specific recommendations developed for adopting those at the farm level in target areas. b. Three Regional Agricultural Research Stations located in the target areas staffed with 10 trained Bolivians planning, executing, and managing research programs relevant to specific production problems. c. The [illegible] Research Division with four trained Bolivians, identifying critical problem areas requiring research as evidenced by the number and types of problems proposed for research. d. Two universities involved in researching critical regional production problems and offering expanded agricultural programs more directly related to Bolivian requirements.	1. Technology Development Actual observation by agricultural experts and records of MACAG's Research Division. NOTE: The benchmark data on types of research to be conducted will be established by contractor in concert with USAID and the MACAG.	Assumptions for achieving purpose: 1. That GOB will make available adequate funds to hire and retain qualified research staff, and to provide the necessary research budget.

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AID 1020-20(11-73)

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 1975 to FY 1981
Total U. S. Funding $5.6[illegible],000
Date Prepared: [illegible]

Project Title & Number: Basic Foods Production and Marketing - 511-11-190-264.6

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Purpose:	Conditions that will indicate purpose has been achieved: End of project status (Cont.)		Assumptions for achieving purpose:
2. Technology Extension: To extend to small farm operators in target areas the improved technologies and more modern production practices.	2. Technology Extension: a. Central FMCAG Extension Service staffed with four trained extension programmers, developing and planning and executing improved extension programs. b. Three Extension Centers located in the target areas staffed with 40 additional trained agents and 10 subject matter specialists planning, executing and managing regional extension programs. c. Extension agents conducting at least 3 training programs per year for farmers in each of the target areas. d. FMCAG Extension Division extends results of research studies to at least 50% of farmers in target areas, as follows: [illegible] e. Improved technologies actually accepted by at least 60% of the farmers in target areas, as follows: [illegible] f. Annual use of fertilizers by small farmers in target areas increase by 300% by 1982. g. Distribution of improved seed by FMCAG among small farmers increases by 300% by 1982. h. Purchase of modern agricultural equipment by small farmers in target areas increase by 100% by 1982.	2. Technology Development - Importers and distributors' records of fertilizer sales to farmers. - Records of FMCAG's Department of Extension. - Importers and distributors' records of equipment sales. - Observation and inspection by agricultural experts. - Records of contractor.	1. Small farmers in target areas will be responsive to economic incentives and adopt technological changes. 2. Adequate credit will be available to target group to acquire modern inputs (fertilizers, seed, equipment). 3. Existence of an effective marketing system to allow farmers to dispose of increased production. 4. That GOB will make available adequate funds to retain and support the field efforts of the extension agents.

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AID 1020-20 11-73

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 1973 to FY 1981
Total U. S. Funding $5,[illegible]2,[illegible]
Date Prepared: [illegible]

Project Title & Number: Basic Foods Production and Marketing - 511-11-[illegible]-306.6

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Purpose:	Conditions that will indicate purpose has been achieved: End of project status (Cont.)		Assumptions for achieving purpose:
3. Sectoral Management: To develop the capability of FACAG's offices of Economics and Statistics, Marketing, and Planning to generate basic data, analyze problems, formulate, and implement coordinated policies and programs for the sector.	3. Sectoral Management a. FACAG's Office of Economics and Statistics with four trained professionals collecting, analyzing, and publishing basic socio-economic and production data on a continuing basis. b. FACAG's Office of Marketing with an established and operating Market Information Service staffed with four trained professionals collecting, analyzing, and publishing basic marketing data relevant to farmers in target areas on a continuing basis. c. A strengthened FACAG Planning Office staffed with at least five trained professionals carrying out [illegible], programming, project analyses, and special studies at a competence level meeting professional standards as attested by professional agricultural planners. d. The above offices operating in concert to develop and implement rational agricultural policies leading to increased food production by farmers in target areas. e. Office of Economics and Statistics publishing timely data series on agricultural production, crop forecasts and outlooks, and consumption of agricultural products. f. The FACAG Marketing Office publishing annually at least 4 series on prices and marketings of agricultural products and inputs.	3. Sectoral Management - Observations and records of FACAG's Offices of Economics and Statistics, Marketing, and Planning. - Experts' judgements on market information service, data service, plans, and analyses produced by above offices as well as on policies enunciated and implemented.	3. Sectoral Management - That GOS will make available adequate funds to hire and retain qualified staff for the offices of Planning, Economics and Statistics, and Marketing, and to provide the necessary operating budget.

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AID 1020-2011-72

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 1975 to FY 1981
Total U. S. Funding [illegible]
Date Prepared: [illegible]

Project Title & Number: Basic Foods Production and Marketing - [illegible]-11-1[illegible]-[illegible].6

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS								MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Outputs:	1976	1977	1978	1979	1980	1981	1982	Total		Assumptions for achieving outputs:
1. Technology Development										Technology Development
a. Research studies on crop and livestock production problems in the small farm sector.	24	24	24	24	24	24	24	166	- MACAG records. - USAID documentation.	a. That MACAG officers will be available for training. b. That University students will be available for training.
b. Research studies conducted in collaboration with professors of San Simón and Gabriel René Moreno universities.	4	~~4~~ 5	4	4	4	4	4	28	- Observations and inspection by advisors and Project Manager.	c. University professors agree to cooperate with MACAG and advisors in conducting studies. d. That universities agree to implement revised, improved curriculums.
c. Thesis projects in agriculture at the universities of San Simón and Gabriel René Moreno related to production problems in target areas.	4	~~4~~ 15	4	4	4	4	4	28		
d. Studies recommending improved University curriculums.	2	- 1	2	-	2	-	-	6		
e. New or substantially improved courses.	-	2 6	2	4	4	4	4	20		
f. Division of Research and University personnel trained:										
1) M.S.	-	8 120	8	4	4	4	4	32		
2) [illegible]	-	-	2	-	-	2	1	5		
3) In-service training	40	40	40	40	40	40	40			
4) Short-term courses	20	20 105	20	20	20	20	20	140		
g. Students trained by advisors in formal University courses in agronomy, agriculture, plant and animal science, and agricultural economics.	240	240 2[illegible]	240	240	240	240	240	1,680		
2. Technology Extension										Technology Extension
a. [illegible] on variety trials, improved management practices, and other research results.	8	8	8	8	8	8	8	56	- MACAG records. - USAID documentation.	a. That MACAG extension agents will be available for training. b. That campesinos agree to enroll in courses to be conducted by extension agents.
b. Short courses for campesinos on research results, improved management practices, [illegible] credit, farm [illegible] techniques, fertilizers, equipment, etc.	30	30	30	30	30	30	30	210	- Observations and inspections by advisors and Project Manager.	c. The MACAG extension service agents are adequately paid and supported to perform their functions.
c. Research and extension bulletins distributed in target areas.	48	48	48	48	48	48	48	360		

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AID 1020-3011-72)

Life of Project:
From FY 1975 to FY 1981
Total U. S. Funding [illegible]
Date Prepared: [illegible]

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Project Title & Number: Basic Foods Production and Marketing - 511-11-190-364.6

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS								MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Outputs:	1976	1977	1978	1979	1980	1981	1982	Total		Assumptions for achieving outputs:
d. Department of Extension personnel trained:										
1) M.S.	-	2	2	2	2	2	2	12		
2) M.D	-	-	-	-	-	2	-	2		
3) In-service training	-	40	40	40	40	40	40	-		
4) Short-term courses	-	20	200	20	20	20	20	120		
3. Sectorial Management										3. Sectorial Management
a. Offices of Planning, Marketing, and Economics and Statistics personnel trained in Agricultural Economics and Statistics, Marketing and Planning.			271						- MACA records. - USAID documentation. - Observation and inspection by advisors and Project Manager.	a. That MACAG's officers will be available for training. b. That manuals, procedures, and guidelines will be adopted.
1) M.S.	-	1	2	2	2	2	2	11		
2) M.D	-	-	2	-	-	2	-	4		
3) In-service training	-	30	30	30	30	30	-	-		
4) Short-term courses	-	20	20	20	20	20	20	120		
b. Manuals and procedures developed to guide the operation of MACAG's Offices of Economics and Statistics, Marketing, and Planning	1	1						2		
c. A [illegible] on the organization and [illegible] of public services for agriculture.	1							1		
d. An internal coordinating mechanism to increase effectiveness of above MACAG offices.	1							1		

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AID 1020-2611-P2

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 1975 to FY 1981
Total U. S. Funding $5,642,000
Date Prepared: [illegible]

Project Title & Number: Basic Foods Production and Marketing - 511-11-100-364.6

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Inputs: 1. AID Financed Project Inputs A. Technical Assistance - Total 1. Long-term - Grants (1) Agronomist - Oil Seeds (SC) (2) Agronomist - Crops (SC) (3) Livestock Specialist - Beef and Swine (SC) (4) Agricultural Engineer - Machinery and Irrigation (SC) (5) Agronomist - Cereals (CB) (6) Agronomist - Crops - (CB) (7) Ag. Economist - Production and Resources (CB) (8) Livestock Specialist - Poultry and Dairy (CB) (9) Research Advisor (LP) (10) Extension Advisor (LP) (11) Extension Advisor (SC) (12) Agricultural Economist - Development and Planning (LP) (13) Ag. Economist - Data Systems (LP) (14) Ag. Economist - Marketing Policy and Statistics (LP) (15) Chief of Party (LP)	Implementation Target (Type and Quantity) US$000 1. Long-term Each long-term advisor will cost about $40,200/year calculated as follows: a. Basic salary $22,000 b. Post differential (20%) 4,400 c. Personal benefits (8.5% of 1) 1,870 d. Overhead (50% of a + c) 11,935 The total cost for the listed advisors is as follows: a. 4 will be required for 7 man/years $ 1,126 b. 2 will be required for 6 1/2 man/years 523 c. 3 will be required for 5 man/years 724 d. 4 will be required for 5 man/years 804 e. 1 will be required for 4 man/years 161 f. 1 will be required for 2.1/2 man/years 100 Total $ 3,438	- USAID records including Pro/Ags and PIO/Ts. - Inspection and review of MOE records and budget.	- That AID, GOB, and other donors resources will be provided as proposed. - That qualified Bolivians will be available for training. - That qualified experts will be available on call. That additional funds from AID or other sources, to finance short-term advisors, participant training, and commodities will be made available in a timely basis after the termination of the Agriculture Sector Loan I disbursement period. These project inputs will be loan-financed during the first three years of the project.
B. AID Loan Financed S.T. Technical Assistance Short-term advisors in the areas of research, animal science, plant science, economics, extension, and administrative reform will be loan funded. (See LFR for Agriculture Sector Loan I.)	Under Agriculture Sector Loan I, the following TDY technical advisors will be required, at an average monthly cost of $5,000 each: ($000) a. 3 m/m in FY-75 $ 15 b. 32 m/m in FY-76 160 c. 25 m/m in FY-77 125 d. 13 m/m in FY-78 65 73 m/m Total $ 365		
C. Participant Training 1. Grant-funded Extensions of MACAC participants presently in training status.	FY-1975 $ 60		

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AID 1020-20 (11-72)

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 1975 to FY 1981
Total U. S. Funding $5,642,000
Date Prepared: [illegible]

Project Title & Number: Basic Foods Production and Marketing - 511-11-190-364.6

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Inputs: (Cont.) -	Implementation Target (Type and Quantity)		
2. Loan-funded	All new participants will be loan-funded under the Agriculture Sector Loan I which provides $1.0 million for this purpose.		
D. Commodities	FY-1975 FY-1976 Total		
1. Grant-funded Vehicles, office equipment, and supplies to support contract advisors.	45 20 65		
2. Loan-funded	The Agriculture Sector Loan I provides to finance other project related commodities.		
E. Other Costs - Grant-funded	1975 1976 1977 1978 1979 1980 1981		
This component includes international travel and per diem, excess [illegible] / transportation of HHE, transportation, local travel and per diem, housing and education allowances, local [illegible] help ($50/year) to support the contract technicians and about [illegible] to finance in FY 1975 an [illegible] agricultural study currently being undertaken by Utah State University.	550 190 241 204 260 221 413 Total $2,079		
Summary of Grant-funded Project Inputs: FY-1975-1981	($000) Grant (1975-1981)		
Technical Assistance	$ 3,438		
Participant Training	60		
Commodities	65		
Other Costs	2,079		
Grand Total	$ 5,642		
II. GOB Contribution (US$000) Salaries and operating expenses, participant training, and contribution to feasibility studies.	Estimated contribution for the period 1975-1981 For details see Section IV of the PROP.		
III. Other Donors Inputs Possible participation of the UNDP and/or the IDB in financing some of the technicians proposed under this project will be determined at a later date.			

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AID 1020-20(11-78)

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 1975 to FY 1981
Total U. S. Funding $5,[illegible]
Date Prepared: [illegible]

Project Title & Number: Basic Foods Production and Marketing - 511-11-190-304.6

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS			MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Inputs:					
IV. Summary of Project Contributions ($000)	Total	Percent	(%)		
USAID:					
Grants	$ 5,642	17.4			
Loans	11,400	35.2	52.6		
COB:					
Grant-related	9,330	28.8			
Loan-related	6,000	18.6	47.4		
TOTAL	$32,372	100%	100.0		

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