PD-AAA-962-B1 521-069 file

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AID 1020-11 (FACE SHEET) PAGE 1 of 40 PAGES

NON-CAPITAL PROJECT PAPER (PROP)

I. PROJECT IDENTIFICATION

PROJECT TITLE

AGRICULTURAL DEVELOPMENT SUPPORT

APPENDIX ATTACHED ☒ YES ☐ NO

2. PROJECT NO. (M.O. 1095.2) 521-15-190-069

☒ COUNTRY HAITI ☐ REGIONAL ☐ INTERREGIONAL

4. LIFE OF PROJECT: BEGINS FY 73 ENDS FY 77

5. SUBMISSION: ☐ ORIGINAL ☒ REV. NO. 1 DATE 6/20/74

CONTR./PASA NO.

II. FUNDING ($000) AND MAN MONTHS (MM) REQUIREMENTS

A. FUNDING BY FISCAL YEAR	B. TOTAL $	C. PERSONNEL (1) $	C. PERSONNEL (2) MM	D. PARTICIPANTS (1) $	D. PARTICIPANTS (2) MM	E. COMMODITIES $	F. OTHER COSTS $	G. PASA/CONTR. (1) $	G. PASA/CONTR. (2) MM	H. LOCAL EXCHANGE CURRENCY RATE: $ US ____ (U.S. OWNED) (1) U.S. GRANT LOAN	(2) COOP COUNTRY (A) JOINT	(2) COOP COUNTRY (B) BUDGET
TRANSITIONAL QUARTER	58	53	10	4	1	1						3.0
OPRN FY 74	145	40	15	-	-	75	30	40	15			8.0
BUDGET FY 75	235	167	56	10	3	32	26	167	56			37.5
BUDGET	339	63	22	10	3	100	166	63	22			119.5
	60	35	12				25	35	12			113.5
GRAND TOTAL	837	358	115	24	7	208	247	305	105			281.5

OTHER DONOR CONTRIBUTIONS

(A) NAME OF DONOR	(B) KIND OF GOODS/SERVICES	(C) AMOUNT
Chinese Agricultural Mission	Tech Assistance	$ 120,000
Mennonite Rural Dev. Council	Tech Assistance	$ 25,000

III. ORIGINATING OFFICE CLEARANCE

	TITLE	DATE
Leroy H. Rasmussen	Agricultural Development Officer	6/12/74
Scott L. Behoteguy	USAID Representative	6/14/74

IV. PROJECT AUTHORIZATION

1. By July 30, 1974 the Mission should present to AID/W a time-phased implementation plan for the specific policy analyses to be undertaken. PROP approval assumes that the analyses will be completed, or substantially completed, by the time the two pilot projects have been selected for development.
2. The Mission is to prepare evaluation plans for each of the sub-projects to be undertaken hereunder by September 1, 1974.
3. The Community Irrigation Systems survey, and the rice and maize sub-projects, may be initiated in FY 74, if feasible.
4. Pro Ag shall reflect requirement GOH contribute NLT 25% project costs.

BUREAU	SIGNATURE	DATE
LA/DR	RSeifman	6/18/74
LA/DR	BSidman	6/19/74
LA/CAR	WBWheeler	6/21/74
LA/DP	LHarrison	

BUR/OFF.	SIGNATURE	DATE
LA/OPNS	CUyehara by PJR	6/20/74
GC/LA	EHarkins	6/24/74
LA/DR	JRBreen	6/25/74

ASSISTANT AID/OFFICE DIRECTORS

NAME	DATE
Herman Kleine	6/25/74
AA/LA	

4. APPROVAL A/AID (See M.O. 1025.1 VI C)

SIGNATURE	DATE
NA	
ADMINISTRATOR, AGENCY FOR INTERNATIONAL DEVELOPMENT	

I. THE PROJECT GOAL

A. Goal Statement

The goal of the project is to increase and to improve agricultural production in Haiti thereby contributing to better nutritional levels and to provide opportunities for Haitian farmers to capitalize on these efforts.

B. Measurement of Goal Achievement

The achievement of the project goals will be determined by:

- a measurement of increased production and productivity,
- a measurement of improvement in nutritional levels,
- a measurement of improvement in income from the marketing of agricultural production,

realized within the target groups identified with the various project activities.

C. Assumptions of Goal Achievement

The attainment of the project's goals is contingent upon the following assumptions which are outside the influence of this project.

- The GOH will progressively modify policy and place a higher priority on the development of the rural economy. These modifications are identified as the allocation of increased budgetary resources and manpower to support agricultural activities, and the revision of certain pricing and taxation policies that appear to inhibit rural development.

- Donors and International Organizations will work to create new improved mechanisms within the GOH to coordinate assistance to the rural sector.

II. THE PROJECT PURPOSE

A. Statement of Purpose

The purpose of this project is to support GOH efforts to improve the well-being of the rural community through encouraging and assisting with new initiatives in agriculture. This will be accomplished through selected area-oriented or commodity-oriented agricultural programs and studies. The project envisages the strengthening of the analytical capabilities as well as the delivery systems of existing GOH institutions that are engaged in agriculture-oriented activities. It provides opportunities for increased employment and increased incomes through the implementation of various integrated production programs.

B. Conditions Expected at the End of the Project

If the project purposes are achieved, the following conditions will exist:

1. An analysis to be financed by the USAID, of at least five areas of current GOH agricultural policy, whereby pricing, taxation, or marketing controls on commodities appear to be agents of production constraint, will have established the degree of validity of such claims and, when required, will have induced the GOH to modify the official position to eliminate or to have lowered barriers to increased production.

2. The U. S. and the GOH will have selected for further assistance that portion of the sector, or those portions, which have demonstrated the best probable response to intensification of cropping systems.

3. The experimental work conducted with high-lysine maize will have led the GOH to the decision to meet the national protein deficit

either through expansion of HL maize on a national scale, or to concentrate upon the production of improved varieties of common corn supplemented with beans.

4. Importation of rice seed into the country will be limited to small quantities of registered seed, and the multiplication of certified seed will take place locally.

C. Basic Assumptions

The GOH will place increased and effective emphasis on the development of the rural sector by supporting major policy changes, institutional strengthening and increased budget allocations. Sufficient institutional strength exists at present to implement the proposals in this project.

III. PROJECT OUTPUTS

A. Kind of Outputs	Magnitude	Target Completion Date
1. U. S.		
(a) Analysis of Policy	Detailed examination of the effect of internal pricing policy as an apparent restraining influence on the production of sugar, mangos and cotton; an examination of pricing policy on butchered	

A. Kind of Outputs	Magnitude	Target Completion Date
	livestock, which apparently favors the exportation of animal protein rather than stimulating internal consumption; and an examination of the effect of coffee export taxes as they relate to annual levels of production will be undertaken successively in FY 75 and FY 76. (Coffee study to be financed under Project 073)	June 30, 1976
(b) Project Identification (Community IRR Systems)	A survey of ten small community irrigation systems judged capable of supporting an intensified cropping system will be undertaken. (Small equals approximately 100 - 1000 hectares). The survey will include a description of the land and water resources, an estimate of the cost of providing irrigation water, the economics of the	

A. Kind of Outputs	Magnitude	Target Completion Date
	proposed cropping system, the presence of local leadership to organize and direct the population, the availability of GOH technical assistance, the profile of the target recipient, and the advantages that would accrue to the country as a result of the successful implementation of the proposal. (Note: a fuller explanation of the proposal is appended to this PROP)	December 31, 1975
(c) Project Implementation (Community IRR Systems)	Following completion of the project identification (b) above, two of the irrigation systems will be selected for rehabilitation. The purpose of the development will be to introduce an intensified agricultural cropping system on small holdings. Explanation of the proposal is included in the appendix mentioned above.	June 1977

A. Kind of Outputs	Magnitude	Target Completion Date
(d) Rice Seed Multiplication	100 hectares of high-yielding rice seed production will be undertaken with the assistance of a Chinese Agricultural Mission in the Artibonite Valley. The 400 tons of certified seed to be produced annually will provide for regeneration of farmers seed stocks every three years. (see appendix)	July 1977
(e) Maize Production Demonstrations	A maize production package will be tested with 500 farmers near Grande Riviere du Nord. The Mennonite Central Committee will assure overall project direction. New varieties of ordinary and high-lysine planting materials from CIMMYT to be tested as	

A. Kind of Outputs	Magnitude	Target Completion Date
	well as the receptiveness of Haitian farmers to technological innovation. (See appendix)	July 1977
2. Other Donors		
Policy Analysis	Although most donors and international organizations agree on importance of bringing GOH to focus on these problems-to best of our knowledge no actual analysis is planned.	
Project Identification (Community Irrigation Systems)	Several other donors active in this field, however, none involved in geographic areas selected by USAID. Examples of similar but non-competitive project studies now underway or planned include: FAO-in Port-de-Paix area, IBRD-Plaine du Nord (Cap-Haitien), French-Jacmel, Fed. German Rep.-Gonaive Plain.	

A. Kind of Outputs	Magnitude	Target Completion Date
Project Implementation (Community Irrigation Systems)	Same statement as above applies. Similar activities planned with same target group, but in other geographical areas of the country.	
Rice Seed Multiplication	150 farmers trained in seed multiplication by Chinese Agricultural Mission.	July 1977
Maize Demonstrations	Resolution of question concerning practicability of meeting Haitian protein deficit through introduction of high-lysine maize on national scale. (Other Donors are Mennonite Rural Development Council at Milot assisted by CYMMYT Center in Mexico)	July 1977

A. Kind of Outputs	Magnitude	Target Completion Date
3. GOH Outputs		
(a) Policy Analysis	Somewhat difficult to quantify pending results of analysis. If USAID preliminary appraisals are correct, production of sugar and cotton can be appreciably increased when GOH frees these two commodities from present unrealistically low internal price ceilings. In case of sugar, increase in internal price will permit farmers to use inputs such as fertilizers which will increase yields. Same generally applies for cotton. In case of mangoes, preliminary evidence indicates that export this plentiful commodity restricted by 'ad-hoc' tax and controls which serve only selfish interests one or two exporters.	

A. Kind of Outputs	Magnitude	Target Completion Date
(a) Policy Analysis	As regards animal protein, it strikes USAID as paradox that in protein deficient country, animal products exported in wholesale lots. It possible that if marketing mechanisms are adjusted, local population may be able to purchase more of this locally-grown commodity themselves.	
	Coffee export tax and its effect on production long identified as possible constraint on production. Even though taxing system was changed ten months ago, USAID believes analysis of new system warranted in view of the importance of coffee to Haitian economy.	June 30, 1976
Project Identification (Community Irrigation Systems)	Feasibility studies on ten community irrigation systems, rank ordered in potential for development.	December 31, 1975

A. Kind of Outputs	Magnitude	Target Completion Date
Project Implementation (CIS)	Provides field-testing of advisability of introducing intensive cropping systems to target group of extremely small impoverished land holders who live on potentially most productive areas in the country.	June 30, 1977
Rice Seed Multiplication	400 tons of improved rice seed for distribution to rice farmers in the Artibonite Valley every year.	July 1977
Maize Demonstration	Resolution of question concerning practicability of meeting Haitian protein deficit through the introduction of high-lysine maize on a national scale.	July 1977

Basic Assumptions

The achievement of the outputs will be contingent upon the follow-through of the implied commitments in a timely manner on the part of USAID, GOH, The Chinese Agricultural Mission and the Mennonite Rural Development Council.

IV. PROJECT INPUTS

A. Kind of Inputs	Magnitude	Date Scheduled for Delivery
1. U. S.		
Policy Analysis	Five commodity studies (one of which will be financed outside of this project). Estimated 4-6 MM short-term assistance each study for total 16-24 MM)	FY 75 and FY 76
CIS Identification	Ten small community irrigation systems studied. (See scope of work and rationale which are appended.) Estimate 4 MM per area or total approx 40 MM total short-term assistance.	Jan - Dec 1975
CIS Implementation	Two CIS development plans implemented as a result of activity noted above. 24 MM of T/A required plus some small construction equipment (cement mixers, hand tools, dump truck, pipe, seed, ferti-	

A. Kind of Inputs	Magnitude	Date Scheduled for Delivery
	lizer, insecticied, etc.) Also included are L/C costs to provide 50% cash payment to resident land owners for their labor assuming they make equivalent contribution. Estimated costs $70,000 per project = $140,000.	
Rice Seed Multiplication	AID inputs = $60,000 for commodities and $10,000 for local costs. Commodities include small land preparation equipment, hand winnowers, foot threshers, hand sprayers, seed, fertilizer. Local Costs include construction drying aprons, seed disinfecting basins.	July, 1974 - July, 1977
Maize Demonstrations	AID inputs estimated at $25,000 per year for three years. Costs include provision TDY T/A from CYMYYT, planting materials and other production inputs.	July, 1974 - July, 1977

A. Kind of Inputs	Magnitude	Date Scheduled for Delivery
Project Support Costs	Through the life of the project AID will furnish supporting costs for office space and utilities, local transportation costs, local personnel, equipment and supplies to support short-term consultants and advisors to carry out their missions. Total = $106,000	Through life of project
2. Other Donors		
Rice Seed Multiplication	Chinese Agricultural Mission will assign ten men full time to the project	During three-year life of the project.
Maize Demonstrations.	The Mennonite Central Committee will furnish a full-time project Manager.	
3. GOH Inputs		
Policy Analysis	GOH will furnish counterpart personnel insofar as the quest for data, information, and other materials are required in the conduct of the analyeis. Senior agricultural personnel will study the ana-	

A. Kind of Inputs	Magnitude	Date Scheduled for Delivery
	lysis, and be responsible for the bringing about of policy change. This can include a requirement for legislative as well as executive decision, the preparation of new laws, regulations, and executive memoranda. A good deal of staff work is anticipated. Est. 1.5 man years Senior Agricultural Officer time as counterpart to person(s) conducting initial analysis and 15 man years plus staff to bring about change.	FY 73 through FY 77
CIS Identification	GOH will provide 72 MM of technical and administrative services to complement the AID professional contribution and to assist in the evaluation of the projects.	Jan - Dec 1975

A. Kind of Inputs	Magnitude	Date Scheduled for Delivery
CIS Implementation	GOH will provide 60 MM of professional and sub-professional technical as well as artisan assistance and 12 MM of administrative assistance per each project. A contribution of an estimated 67,500 man/days labor will be donated thereby matching AID assistance for the construction of canals, reservoirs, dams, catchment basins, fencing, etc.	
Rice Seed Multiplication	GOH contribution includes 21 man years agronomic and extension agent assistance plus use of 4 hectare demonstration farm and buildings, expendable supplies and 10-20 laborers on full-time basis.	

A. Kind of Inputs	Magnitude	Date Scheduled for Delivery
Maize Demonstration	GOH contribution equals 21 man years agronomic and extension agent assistance 18 MM agriculture research assistance and supporting administrative costs for GOH personnel.	

BUDGET SUMMARY (U. S.)

FY 1973

ACTIVITY	PERS	PART	COMM	O/C	TOTAL
Policy Analysis	53.0 (10 MM)	4.0 (1MM)	1.0		58.0
Total	53.0	4.0	1.0		58.0

FY 1974

ACTIVITY	PERS	PART	COMM	O/C	TOTAL
Policy (Sectoral)	34.0 (12 MM)	-			34.0
Rice Mult.	-	-	60.0	10.0	70.0
Maize	6.0 (3 MM)	-	15.0	4.0	25.0
Support	-	-	-	16.0	16.0
Total	40.0 (15 MM)	-	75.0	30.0	145.0

FY 1975

ACTIVITY	PERS	PART	COMM	O/C	TOTAL
Policy Analysis	40.0 (12 MM)	-	-	-	40.0
Maize Demonst.	7.0 (4 MM)	10.0 (3MM)	7.0	1.0	25.0
CIS Identific.	120.0 (40 MM)	- -	10.0	-	130.0
Support	- -	- -	15.0	25.0	40.0
Total	167.0 (56 MM)	10.0	32.0	26.0	235.0

FY 1976

ACTIVITY	PERS	PART	COMM	O/C	TOTAL
Policy Analysis	20.0 (6 MM)	-	-	-	20.0
Maize Demonst.	8.0 (4 MM)	10.0 (3MM)	6.0	1.0	25.0
CIS Implement.	25.0 (12 MM)	-	94.0	140.0	269.0
Project Support	- -	-	-	25.0	25.0
Total	63.0 (22 MM)	10.0 (3MM)	100.0	166.0	339.0

FY 1977

ACTIVITY	PERS	PART	COMM	O/C	TOTAL
CIS Implement.	35.0 (12 MM)	-	-	-	35.0
Project Support	- -	-	-	25.0	25.0
Total	35.0 (12 MM)	-	-	25.0	60.0

BUDGET SUMMARY (U. S.)

TOTAL ALL YEARS						
ACTIVITY	PERS		PART		COMM	O/C	TOTAL
Policy Analysis	147.0	(40MM)	4.0	(1MM)	1.0	-	152.0
Rice Seed Mult.	-	-	-	-	60.0	10.0	70.0
Maize Demonst.	21.0	(11MM)	20.0	(6MM)	28.0	6.0	75.0
CIS Feasibility	120.0	(40MM)	-	-	10.0	-	130.0
CIS Implement.	70.0	(24MM)	-	-	94.0	140.0	304.0
Project Support	-	-	-	-	15.0	91.0	106.0
Total	358.0	(115MM)	24.0	(7MM)	208.0	247.0	837.0

BUDGET SUMMARY (GOH)

ACTIVITY	PERSONNEL		COMMODITIES	LOCAL COSTS	TOTAL
FY 1973					
Policy Analysis (pre-sectoral studies)	3.0	10 MM	--	--	3.0
FY 1974					
Policy Analysis (sectoral analysis)	6.0	24 MM	--	--	6.0
Rice Seed Multiplication (planning)	2.0	6 MM	--	--	2.0
Sub-Total FY 74	8.0	30 MM	--	--	8.0
FY 1975					
Policy Analysis	9.0	18 MM	--	--	9.0
Rice Seed Multiplication	7.0	84 MM	1.0	4.0	12.0
Maize Demonstr.	8.5	90 MM	--	--	8.5
CIS Studies	5.0	36 MM	2.0	1.0	8.0
Sub-Total FY 75	29.5	228 MM	3.0	5.0	37.5
FY 1976					
Policy Analysis	18.0	60 MM	--	--	18.0
Rice Seed Multiplication	7.0	84 MM	1.0	4.0	12.0
Maize Demonstr.	8.5	90 MM	--	--	8.5
CIS Studies	5.0	36 MM	--	1.0	6.0
CIS Implementation	5.0	36 MM	--	70.0	75.0
Sub-Total FY 76	43.5	306 MM	1.0	75.0	119.5

FY 1977

ACTIVITY	PERSONNEL		COMMODITIES	LOCAL COSTS	TOTAL
Policy Analysis	18.0	60 MM	--	--	18.0
Rice Seed Multi-plication	7.0	84 MM	1.0	4.0	12.0
Maize Demonstr.	8.5	90 MM	--	--	8.5
CIS Implementation	5.0	36 MM	--	70.0	75.0
Sub-Total FY 77	38.5	270 MM	1.0	74.0	113.5

TOTAL YEARS GOH BUDGET

ACTIVITY	PERSONNEL		COMMODITIES	LOCAL COSTS	TOTAL
Policy Analysis	54.0	172 MM	--	--	54.0
Rice Seed Multi-plication	23.0	258 MM	3.0	12.0	38.0
Maize Demonstr.	25.5	270 MM	--	--	25.5
CIS Studies	10.0	72 MM	2.0	2.0	14.0
CIS Implementation	10.0	72 MM	--	140.0	150.0
	122.5	844 MM	5.0	154.0	281.5

TOTAL U. S. CONTRIBUTION = $ 837.0

TOTAL GOH CONTRIBUTION = $ 281.5

$1118.5

281.5 + 1,118.5 = 25.2% GOH Contribution to Project

V. RATIONALE

From 1962 on, USAID assistance to Haiti was limited to humanitarian activities principally in the fields of malaria eradication and Title II, PL-480 programs. In 1966, a community action project was begun in the Northwest with USAID support (HACHO). By 1972, as the development climate appeared to show gradual improvement, so too did the opportunity for renewing a program of cooperative assistance.

A more intensive examination of the existent developmental environment was begun in late FY 73. This examination recognized the weakness of GOH institutions, while at the same time heeding the urgent need for increasing assistance to the rural sector which produces approximately half of the Gross Domestic Product and where a full 80 percent of the population is employed.

In order to substitute an objective choice of action for development planning for subjective judgment, the USAID decided with the IDB and the IBRD to initiate and conduct selected commodity and sub-sectoral investigations. This pooled assessment effort has led to the acquisition of sufficient meaningful data which, when subjected to analysis, has identified priorities for assistance.

The AID sector assessment has identified many serious constraints which have impeded the development of the Haitian rural sector. Foremost among these is the evident lack of concern for the rural population on the part of the urban elite and certain elements of the responsible ministries. This lack of concern has resulted in the almost total absence of govern-

mental services in the rural areas and the extraction of financial resources from the rural population in the form of taxes which are spent to provide services in urban areas. This flow of resources from rural to urban communities has resulted in low levels of income, underemployment, and the decay of rural resources (irrigation systems, roads, and renewable natural resources). The development of the agricultural sector will depend upon reversing this process to provide for more financial and human resource transfers to the rural areas.

The sector assessment suggests that under the present situation in Haiti there is only one feasible strategy to pursue at this point in time. In view of the serious infrastructure weaknesses, attitudinal concepts and policy deficiencies which exist, AID assistance to the GOH should be confined to those short-term activities which are within the realm of possibility. The strategy proposes to conduct integrated activities in agricultural production in specific areas which meet the criteria of (1) having potential for increasing production and productivity because of the soil characteristics and the availability of irrigation, (2) having access to markets and public services, (3) having assurance of a GOH commitment of personnel and funds to carry the programs out. The activities selected for assistance under the Grant are those capable of being implemented in the short-term while other constraints of a longer term nature are addressed through other means.

Those constraints which must be addressed in the long term include:

tax policies relating to land, imports, exports, transportation, monopolies markets and other systems, (2) institutional and manpower weaknesses, (3) recapitalization of investments in agriculture (irrigation systems and road nets) and (4) conservation of renewable resources.

The short term activities proposed in this PROP include an in-depth analysis of the economics of production and marketing of five specific commodities, a study of ten community irrigation systems and the financing of rehabilitation works and the establishment of intensive cropping on two of the community irrigation systems. The policy analysis element has strong possibilities for inciting the GOH to change or modify certain policies that appear to be actively restraining the production of key commodities.

The other four program elements have been selected for their potential for starting needed activities which are capable of being satisfactorily implemented within the extremely limited infrastructural framework. These program elements also have potential for improving the capabilities of Government institutions by increasing GOH involvement in providing services in rural areas.

The program proposed represents an action program which can be undertaken and which can be expected to yield results on a near-term basis while more basic changes essential to development on a longer term are brought about in governmental attitudes and policy. The short-term area-oriented agriculture production program tackles the problems of rebuilding the infrastructure, providing employment and increasing agriculture production and productivity. As success is achieved in these specific areas, other activities in other areas will be more possible in the future.

VI. COURSE OF ACTION

1. Implementation Schedule

A. Undertake sub-sector studies and complete sectoral assessment (concluded).

B. Initiate Irrigation Project Investigations - August 1974

C. Initiate Policy Studies - September 1974

D. Initiate Rice Seed Multiplication Proposal - August 1974

E. Initiate Maize Demonstrations - June 1974

F. Commence Rehabilitation Two Irrigation Projects - May 1975

G. Assist with Improving Planning Abilities of CONADEP and the Min Agr - Continuous Throughout the life of the Project.

2. Narrative Statement

The recently concluded assessment of the Haitian rural sector has been generally considered by all to have been a necessary prelude to new investments and programs in the country. The assessment provides the strategy for taking the first steps in reversing this trend in spite of the overall weakness of the developmental environment. This proposal presents opportunities for both short-term and long-term benefits that can accrue to the rural communities of Haiti.

MAIZE DEMONSTRATION SUB-PROJECT

Haiti, with a population estimated at 5 million inhabitants, encompasses 2.8 million hectares of land. Although nearly 900,000 hectares are currently cultivated in annual crops, 556,000 hectares of these are on mountain slopes which ideally should not be cultivated because of erosion problems and only 350,000 hectares are truly arable land. Thus, the pressure of people on land is among the most intense in the world.

Corn is second to millet as the most important food grain produced in the country, and as such constitutes a significant portion of the diet of the low-income segment of the society. Studies indicate that malnutrition in the form of protein deficiency continues to be a serious public health problem. One potential method of attacking the problem would be to increase the protein quality of staple foods. Opaque-2 maize, the best known staple with a high-lysine content, contains up to 90% more of the essential amino-acid and up to 70% more tryptophane than common corn. Recent studies indicate that reasonable quantities of Opaque-2 maize can fully satisfy human requirements for essential amino-acids and thus alleviate or eliminate protein deficiency.

It appears obvious then that the substitution of Opaque-2 for common corn would be indicated in most areas of the country. Haitian preference, however, is for a corn with a hard yellow endosperm, high-kernel test weight, high-yielding capacity, and good keeping qualities in storage. By contrast, Opaque-2 maize has a soft white endosperm, low-kernel density, lower farm yields, and a greater susceptibility to insects and

disease. Recent Opaque-2 introductions such as Veracruz-181 are reported to approach Haitian preference standards while retaining the benefits of the high-lysine content.

During the period 1970-1973, the Research Foundation of New York provided limited assistance to the Ministry of Agriculture for the purpose of testing Opaque-2 maize in Haiti. Some experience has been gained from this effort. Other efforts at improving agricultural methods in recent years have been organized by religious groups and voluntary agencies. Some of these programs have been very successful but of limited scope. Cooperation between these private groups and the National Agricultural Research Service in an expanded effort could be of major significance in improving conditions in Haiti.

In February, 1974, the Mennonite Rural Development Council at Milot, in Northern Haiti, received the approval of the Minister of Agriculture to undertake a corn improvement program with 500 families. Dr. E. J. Wellhausen, Rockefeller Foundation, and a select committee are being asked to study the desirability of furnishing planting materials and technical assistance to the Mennonite program to determine the receptivity of a high-lysine maize program in Haiti.

The USAID contribution to this program would furnish TDY technical assistance to the project from CYMMYT over a three-year period, would finance the germ plasm as well as any fertilizers and the insecticides required. The Mennonite Council will direct the project, oversee the formation of the farm groups into an ad-hoc cooperative, and assist the GOH agronomist and six extension agents in the conduct of their daily activities with the farmers.

The project output will be a determination, either positive or negative, concerning the acceptability of high-lysine maize to the subsistence farmer as well as to the low-income consumer. Every effort will be expended to find a product that is compatible with local preferences, that yields well and that can be cultivated with local methods. The project is, in fact, a field evaluation of a product whose desirability is known in advance, but for which little is known of its adaptability to the ecologic environment and whose consumer acceptability must be tested. For that reason, the Opaque-2 materials will be introduced in conjunction with known high-yielding varieties which do not have a high-lysine content and which should satisfy consumer preferences so as not to produce undue hardships for subsistence farm families.

USAID Contribution:	$25,000 per year over three years	=	$ 75,000
GOH Contribution:	3-man years of a University-trained agronomist, 18-man years of extension agent assistance, and 18-man months of Agricultural Research Assistance plus supporting/administrative costs.		
	1 Agronomist = 3 years x $2,000 p.a.	=	$ 6,000
	6 Extension Agents = 3 yrs.x6 x$840 p.a.		$ 15,120
	½ Agronomist AGR RCH:3 yrs x ($3,000:2)=		$ 4,500
	SUB-TOTAL	=	$ 25,620
	Supporting Administrative Costs @$20%	=	$ 5,124
	TOTAL	=	$ 30,744

RICE SEED MULTIPLICATION SUB-PROJECT

There are presently no seed production activities in Haiti of any consequence for basic food grain crops. In 1973, 100 tons of rice seed were imported from the United States. This amount of seed was sufficient to replant 1500 hectares, or approximately 4% of the total rice-producing area in the Artibonite Valley. Imports in future years at this same rate would provide for renewal of rice seed once every 25 years - a rate so slow that degeneration of rice species is certain to occur, thereby greatly decreasing yields.

The Chinese Agricultural Mission to Haiti (CAM) began its operations in the Artibonite Valley in November, 1972. The ten-man team has conducted exhaustive adaptive research trials with rice on a four-hectare demonstration farm in the valley and has designed a technological package for the area. The package includes identification of adapted varieties, fertilizer and insecticide requirements, planting dates, water control, etc. The Minister of Agriculture has requested the Chinese Mission to expand its efforts and to begin a seed multiplication program with 150 small farm families who are farming a total of 100 hectares.

Neither the CAM nor the Office for the Development of the Artibonite Valley (ODVA) has funding available to capitalize the new effort. USAID has been asked to make available $60,000 in commodities and $10,000 in local currency to start the program for a total of $70,000.

The foreign exchange assistance requested from the USAID includes non-expendable material assistance for the cooperating farmers such as 15 gas-powered land tillers, 30 foot-operated threshers, 15 hand-operated winnowing fans, sprayers, etc., as well as one vehicle for CAM and ODVA technicians. Also included are $15,000 for expendable supplies such as improved seed, insecticides and fertilizers which are to be sold to the farmers, with the money to be used to establish a revolving fund.

The local currency is to be used for the construction of concrete drying aprons and disinfecting pools.

The output from the project will be 400 tons of improved rice seed per year, which is to be purchased by the ODVA at nearly twice the price of non-improved rice and distributed to other farmers in the valley on an "exchange" basis. The exchange formula will require that a farmer give two kilograms of non-improved rice for each kilogram of improved rice seed. The ODVA will be responsible for managing the system of purchasing rice from cooperating farmers and selling it on an "exchange" basis to other farmers. This system is expected to be financially self-sufficient and no AID financing will be required. The project will permit rice growers in the area to renew their seed every six to seven years.

The USAID funding will be provided in the first year of the project for the purpose of capitalizing the project.

The GOH contribution will include counterpart personnel for the CAM and the use of the four-hectare demonstration farm at Muaz for continuing adaptive research and parent seed production. The GOH also contributes housing for the CAM and 10 to 20 laborers on the demonstration farm. This GOH contribution will continue for the three-year life of the sub-project.

Counterpart Personnel

1 - College-trained agronome		$ 2,000
6 - Extension agents @$840/year		$ 5,040
Farm, irrigation water, buildings, expendable supplies, labor		$ 5,625
	***	$12,665 x 3 years=$37,995

*** This is a sub-activity of a larger project.

COMMUNITY IRRIGATION SYSTEMS SUB-PROJECT

As reported in the Agricultural Sectoral Assessment for Haiti, the most characteristic feature of the rural society is the smallness of scale of the individual holdings. There are reportedly 750,000 individual farming units cultivating approximately 1 million land parcels. The average size of these holdings is 1.1 hectares, and 75% of this total are under four hectares in size.

Of the total land area of Haiti (2.8 million hectares) only 870,000 has. are suitable for cultivation. 500,000 of these are in mountainous regions and are suitable principally for tree crop production such as coffee, mango and plantain, as well as for livestock grazing, all of which are important crops for both local and export uses.

On the 370,000 hectares remaining are produced the basic food crops which account for 45% of the value added from agriculture and which employ 49% of the rural labor force of the country. Key industrial crops such as sugar, cotton and tobacco are also produced on these lands. Population density now exceeds 5 persons per hectare. (Note: Specific data are non-existent, however, random sampling in the Artibonite Valley - IICA, 1971 - indicates a population density of 8 persons per irrigated hectare.) With the population now increasing at an annual rate of 2.2% per year, one hesitates to speculate on the effects of the increasing numbers of people per unit of land ten years from now.

Virtually all of the tillable land has been cultivated. There are, however, an estimated 125,000 hectares of land deemed to be irrigable, and of which existing systems now serve around 70,000 hectares. About half of this area is considered to be more or less effectively utilized and lies within three major projects, e. g. The Artibonite Valley, the Cul-de-Sac Plain, and the Plain of Gonaives. Of the remaining irrigable lands, little is known, except that inadequate maintenance and lack of direction have permitted most of the area to fall into disuse with the result that little or none of the soils' real potential is being utilized.

Any development in the agricultural sector in Haiti must reverse the continued decapitalization or ineffective use of the rural infrastructure and the natural resources. If one considers that irrigated lands are at least four times as productive as similar non-irrigated soils (a conservative estimate) then the 30,000 hectares of land contained in the decaying systems around the country represent a potential reservoir equivalent to 120,000 has. of productive land. And, should one include the 40 to 45 thousand hectares considered susceptible for irrigation, but not yet served even by a deteriorated system, one speaks of an additional potential equivalent to 160,000 or more hectares of arable land.

It is to the decaying systems that this project is addressed. These 30,000 has. employing an estimated 200,000 members of the rural community enjoy the prospect of exceptional productivity both for themselves and their country. As a first step, rehabilitation and maintenance of the irrigation infrastructure must be attained. This must be followed by the introduction of intensive cropping systems destined to meet the needs of the country for nutritional foods and in some cases industrial products.

At present, several of these areas are under consideration as projects by other donors. The FAO at Port-de-Paix is interested in the Three Rivers Area; IBRD has expressed an interest in the plains surrounding Cap-Haitien; the IDB is studying the possibility of improvements to the Artibonite Valley and the Cul-de-Sac; the German Government is active in the Gonaive Plain. Outside of these prime areas remain the isolated and the unknown. Sixty of the seventy-two are outside of the geographical zones of any major donor - some in the particularly impoverished areas of the Northwest, (HACHO) and others in the remote mountains near Jeremie.

This project proposes to undertake a study of ten of the most promising systems and to determine the social and economic implications of their development. The ten areas will represent a cross-section of the national environment. The criteria which will be used by the GOH and USAID in the selection of the ten areas for study will include the presence of external change agents (VolAgs, for example) or the presence of strong natural leadership, production potentials for both food crops and industrial production, the profile of the target farmer, and in particular the size of his holding. (Areas where relatively large farming units predominate, if any, would be excluded.) Other criteria will include the accessibility of the production areas to markets and the effect of known price and/or policy constraints affecting the crops that may be produced by the system. The possibilities for the development of intensive cropping systems will be stressed, for these systems offer the best opportunities for achieving production goals, both in the production of commodities and in the attainment of nutritional objectives. Intensive farming also offers the best advantage for improving the economic well-being of the small farmer.

Of the ten systems subjected to study, two are to be selected for grant assistance for development. The indigenous population is expected to furnish at least fifty percent of the labor required to reconstruct the water delivery system, and for other similar requirements. The GOH is expected to furnish extension agents and agronomists. The project will finance additional technical assistance, small construction equipment and materials.

The goal of this sub-project is the development of a grass-roots community cooperative organization producing in concert with the national needs, utilizing the resources at their disposal effectively, and training GOH personnel in the art of local-level development. The lessons learned from the rehabilitation of two small areas will hopefully pave the way to an expanded program of similar projects on a national scale.

Scope of Work for Pre-Feasibility Study of Irrigation Systems

A. The consultant will perform prefeasibility level economic and technical soundness studies of 10 existing small irrigation systems with an estimated total area of 6,000 hectares. The systems will vary in size from 100 to 1,000 hectares, and are located throughout Haiti.

For each system the following data will be developed:

- Area plan showing location of project, rivers, population centers and transportation network.
- General plan of project showing existing and proposed features.
- Description of scope and magnitude of project, area of land presently served as compared to area of land to be served.

- Discussion of major features of proposed development.
- Discussion of the nature of soils in the area as to types, depths, drainage characteristics and agricultural potential.
- Description of the current condition of the water delivery system and discussion as to why it has deteriorated.
- Description of present agricultural production indicating types, crops, acreages and yields/acre, rotation systems or cropping pattern.
- Prices received at farm level, cost of production and net benefits received.
- Discussion of factors expected to increase production such as changes in size of farms, water allocation, new crops, rotation, markets for present and additional agricultural production, location, capacity to handle increases, transportation facilities and costs.
- Discussion of impact of project on employment in area and attitude of resident population towards rehabilitation and maintenance of system.
- Discussion of Agricultural production upon completion of project indicating type of crops, yield/acre, prices to be received at farm level, cost of production and net benefits.
- Resume of benefits which project would provide to overall production and in increased income to farmers.
- Description of present water usage for various crops and for the area as a whole, quantity and quality of irrigation water, existing water rights and customs, laws and regulations concerning water usage.

- Description of local communities and rural population in area, farm sizes, land tenure systems, land ownership and farm operating pattern.
- Discussion of amount of production retained on farms for family subsistence.
- Location, capacities and pertinent data on any agricultural processing plants, such as sugar mills, fiber plants, packing plants, etc.
- Discussion of availability and cost of agricultural credit to farmers, use of fertilizer, etc.
- Discussion of organization responsible for management of the system with indication of capability of present key officials, and any proposed changes in organization, personnel, operating procedures and water changes and tax structures.
- Description of present and proposed method of operating and maintaining system, availability of trained operating and maintenance personnel.
- Estimated total capital costs for project, broken out in local currency and dollars. Pro-rate to annual cost/hectare benefited.
- Estimated cost of labor, supervision, operating supplies and repair parts, training and admin overhead for operation and maintenance, broken out into local and dollar costs. Pro-rate to annual cost/hectare benefited.
- Estimate of overall annual costs including depreciation and interest on total project investment, based on estimated life of project and ongoing rates in country. Include annual operation and maintenance expenses. Also show annual/cost/hectare benefited.

- Show total estimated revenues including annual benefits to land owner (total and per hectare). Estimate maximum amount land owners could pay in water charges and taxes and still retain reasonable profit. Propose schedule of water charges and taxes and estimate total revenue for each of first 10 years after completion of project.
- Determine benefit - cost ratio taking into account the benefits measured by net farm income and cost of the project, including operation and maintenance. Discuss ability of project to meet operating costs through operating revenues.

B. The consultant will assign priorities to the various projects. On the basis of the findings developed from the evaluation of each of the systems, and with consideration given to the location, economic necessity of the area involved, willingness of the community involved to participate, availability of local management and supervision personnel and counterpart contribution, two of the first priority projects will be selected as pilot projects.

C. As a second phase of work the consultant will further develop the prefeasibility study for the two pilot projects to the level of a full feasibility study by completing the following technical aspects:

- Description of physical features of area with map showing project area in relation to mountains, rivers, population centers, utilities and transportation facilities.
- Discussion of climatic conditions including precipitation, temperature, humidity, wind direction and velocities, evaporation factor, sunlight and length of growing season or seasons.

- Discussion of geology of area as related to water-bearing formations, movement of ground water, presence of harmful minerals or salts, strength and porosity of foundations for any proposed structures and location of suitable construction materials.
- Discussion of hydrology of area including rainfall rates and frequencies, infiltration, run-off, natural and man-made storage features and losses due to evaporation.
- Discussion of the beneficial and detrimental environmental consequences on the area of the proposed project.
- Discussion of standard of construction to be followed, how work should be accomplished (hand or machine), manpower or equipment requirements and availability, availability of construction materials, supervision of work.
- Discussion of proposed construction schedule including consideration of climatic conditions which might affect schedule, necessity to keep existing systems, canals and roads open during the construction period.

D. As part of the feasibility studies the consultant will prepare preliminary projects to include descriptions of work to be performed, preliminary plans, lists of materials to be procured, etc., in sufficient detail to permit the cost of the various elements of the project to be estimated.

Consider:

- Land development - Cost of required land leveling, irrigation and drainage ditches, connection to and improvements of existing road network.
- Control structures - Location and type of diversion structures, intakes, weirs, siphons, flumes, waste ways, drops, checks, highway crossings, gates and measuring devices, drainage features.

- Wells - location, depth, anticipated capacity, water quality, power source.
- Canals and laterals - location, sizes, length, slopes, capacities, need for liming, elimination or removal of silt.
- Construction schedules, inflation, contingencies, operating and maintenance costs.

E. The consultant will adjust the cost - benefit analysis presented as part of the prefeasibility study to reflect the more accurately estimated costs of the preliminary projects.

DEPARTMENT OF STATE

TELEGRAM

PORT-AU-PRINCE

ACTION: AID
INFO: AMB
DCN
CHRON

UNCLASSIFIED
Classification

CONT: 1[illegible]
RCVD: 27 APR 74

R 270018Z APR 74
FM SECSTATE WASHDC
TO AMEMBASSY PORT AU PRINCE 5145
BT
UNCLAS STATE 086518

AIDAC

E.O. 11652: N/A
SUBJ: AGRICULTURAL DEVELOPMENT SUPPORT PROP

REF: PROP DOCUMENT, REVISION NO. 1 (3-11-74)

ON APRIL 3, 1974, THE DAEC REVIEWED AND APPROVED, IN CONCEPT, THE AGRICULTURAL DEVELOPMENT SUPPORT PROP, SUBJECT TO THE FOLLOWING MODIFICATIONS AND CONDITIONS:

A. THE DAEC AUTHORIZED THE CONDUCT OF A LIMITED NUMBER OF IRRIGATION SURVEYS, DESIGNED PRINCIPALLY TO PERMIT THE IDENTIFICATION OF TWO INTEGRATED IRRIGATION SYSTEM REHABILITATION PROJECTS (DESCRIBED BELOW). THE MISSION SHOULD RE-ESTIMATE THE NUMBER, SCOPE AND COST OF SUCH SURVEYS AND SUBMIT ITS FINDINGS AND CONCLUSIONS TO AID/W. AT THIS POINT IN TIME, THE DEVELOPMENT OF A LARGE (72) RESERVOIR OF IRRIGATION PROJECTS -- PRIOR TO THE DETAILED DESIGN AND AT LEAST PARTIAL IMPLEMENTATION OF INTEGRATED PROJECTS - IS PREMATURE.

B. THE FINANCING OF TWO INTEGRATED IRRIGATION SYSTEM REHABILITATION PROJECTS WAS APPROVED IN PRINCIPLE, SUBJECT TO THE REVIEW AND THE CONCURRENCE OF AID/W IN THE FINAL DETAILED PROJECT DESIGNS, INCLUDING COST ESTIMATES. THE PROJECTS SHOULD BE SELECTED AND DESIGNED WITH AN EMPHASIS ON INNOVATION, AS WELL AS REPLICATION; IT IS HOPED THAT THE PROJECTS WILL SERVE AS PILOTS FOR THE SUBSEQUENT DEVELOPMENT OF A NUMBER OF SIMILAR ACTIVITIES, BASED ON BUT BY NO MEANS RESTRICTED TO REHABILITATION OF IRRIGATION SYSTEMS. THE PROJECTS SHOULD ADDRESS INSTITUTIONAL AND POLICY, AS WELL AS PHYSICAL, CONSTRAINTS TO INCREASED PRODUCTION, AND TO THE MAXIMUM EXTENT POSSIBLE PROVIDE A BASIS FOR NEGOTIATIONS WITH THE GOH ON RELEVANT POLICY REFORMS.

C. THE DAEC APPROVED THE FUNDING OF TECHNICAL ASSISTANCE (I) TO ADDRESS POLICY CONSTRAINTS AND DEVELOP MODIFICATIONS IN THE NEAR-TERM; (II) TO IDENTIFY AND IMPLEMENT IRRIGATION REHABILITATION SURVEYS AND PROJECTS (SUBJECT TO THE CONDITIONS EXPRESSED

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ABOVE); AND (III) FOR THE RICE SEED MULTIPLICATION AND MAIZE PRODUCTION DEMONSTRATION ACTIVITIES.

D. THE DAEC PLACED PARTICULAR EMPHASIS ON THE NEED TO IDENTIFY SIGNIFICANT POLICY CONSTRAINTS AFFECTING THE TARGET MAN, AND TO MOVE FORWARD DURING THE NEXT SEVERAL MONTHS WITH THEIR DETAILED ANALYSIS. IT IS EXPECTED THAT AT THE TIME AID/W REVIEWS WITH THE MISSION THE DETAILED PROJECT DESIGNS REFERRED TO ABOVE, AT LEAST SEVERAL POLICY ANALYSES WILL HAVE BEEN CONDUCTED AND IN A FORM FOR JOINT REVIEW. WE ANTICIAPTE THAT IN THE TIME FRAME OF THE IMPLEMENTATION OF THE PILOT PROJECTS, IF NOT BEFORE, THE MISSION WILL BE ABLE TO ENGAGE THE GOH IN SERIOUS DISCUSSION OF SPECIFIC POLICY CONSTRAINTS (PRESUMABLY IN THE AREAS OF TAX AND PRICE) AND PROPOSALS FOR THEIR MODIFICATION. AID/W IS PREPARED TO MAKE AVAILABLE APPROPRIATE TDY ASSISTANCE IN DRAFTING THE SCOPES OF WORK FOR THE POLICY ANALYSES. PRESUMABLY THE PROPOSED TECHNICAL ASSISTANCE WILL EMPHASIZE ON THE HAITIAN SIDE THE DEVELOPMENT OR MODIFICATION OF POLICIES WHICH WILL ADVANTAGE THE TARGET MAN.

IT IS IMPORTANT THAT THE AREAS OF POLICY ANALYSIS BE IDENTIFIED AS EXPEDITIOUSLY AS POSSIBLE. IN VIEW OF THE APPARENT SIGNIFICANCE OF POLICY CONSTRAINTS IN HAITI, WE DO NOT BELIEVE A MAJOR EFFORT IN THE AREA OF IRRIGATION PROJECT SURVEYS SHOULD COMMENCE UNTIL THE MISSION HAS IDENTIFIED, AT LEAST TENTATIVELY, THOSE ANALYSES IT WILL PURSUE OVER THE NEXT SEVERAL MONTHS.

E. SUB-PROJECT ACTIVITY DESCRIPTIONS SHOULD BE PREPARED, FOR INCLUSION IN THE PROP. IT SHOULD DESCRIBE THE DISCRETE PROJECT ELEMENTS, AND, INTER ALIA, SET FORTH THE FOLLOWING:

1. A MORE DETAILED EXPLANATION OF THE ELEMENTS OF RICE AND MAIZE PROGRAMS AND THEIR INTERRELATIONSHIPS (TOUCHING ON, E.G., COORDINATOR'S CAPACITY, EXPERIENCE, COMMITMENT; MARKETING FACILITIES; CONTROL ELEMENTS IN MAIZE DEMONSTRATION PROJECT, ETC.).

2. AN IDENTIFICATION OF THE SPECIFIC STUDIES TO BE CONDUCTED BY GOH IN COORDINATION WITH AID AND OTHER DONORS (SEE PAGE 3 OF THE PROP).

3. AN IDENTIFICATION OF THE AREAS OF POLICY ANALYSIS THE MISSION INTENDS TO PURSUE.

4. A RE-ESTIMATE OF THE NUMBER, SCOPE AND COST OF IRRIGATION PROJECT SURVEYS.

5. A STATEMENT THAT THE 25 PERCENT MINIMUM HAITIAN CONTRIBUTION OF TOTAL PROJECT COST WILL BE ASSURED PRIOR TO OBLIGATION AND BE REFLECTED IN OBLIGATION DOCUMENTS.

F. THE MISSION MAY WISH TO SUBMIT SOME OF THE MATERIAL REQUESTED ON A SUB-PROJECT BASIS. WHILE WE HOPE THAT THIS WILL NOT BE NECESSARY, WE WOULD CONSIDER THE RICE AND MAIZE SUB-PROJECTS IN ADVANCE OF THE OTHER ACTIVITIES, AND AUTHORIZE THEM UPON RECEIPT OF THE REQUESTED DETAILED DESCRIPTION. IF THE MISSION DOES WISH TO PURSUE FINAL AID/W APPROVAL OF THESE SUB-PROJECTS SEPARATELY, IT SHOULD BE KEPT IN MIND THAT THE PROP MUST REFLECT THE MINIMUM 25 PERCENT HAITIAN CONTRIBUTION IN GLOBAL TERMS AT ALL TIMES. AS INDICATED ABOVE, HOWEVER, INITIATION OF THE IRRIGATION PROJECT SURVEY ELEMENT WILL DEPEND ON THE MISSION'S IDENTIFICATION OF AREAS OF POLICY ANALYSIS.

G. GIVEN THE SEVERAL FACETS OF THE PROJECT, IT WOULD BE USEFUL FOR AID/W TO REVIEW A DRAFT PROAG AS SOON AS ONE IS PREPARED. GC/LA REVIEW, IN PARTICULAR, MAY ASSIST MISSION'S EFFORTS TO DESCRIBE SUBPROJECTS, AND GOH OBLIGATIONS AND COMMITMENTS, WITH NECESSARY PRECISION. PROAG SIGNATURE, OF COURSE, IS DEPENDENT ON MODIFICATIONS TO PROP DESCRIBED ABOVE. WHEN MODIFIED, AND WHEN REVISED FACE SHEET REFLECTING BUDGET MODIFICATIONS AND VALUE OF GOH CONTRIBUTION IS SUBMITTED, PROP WILL BE FORMALLY APPROVED BY AA.

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