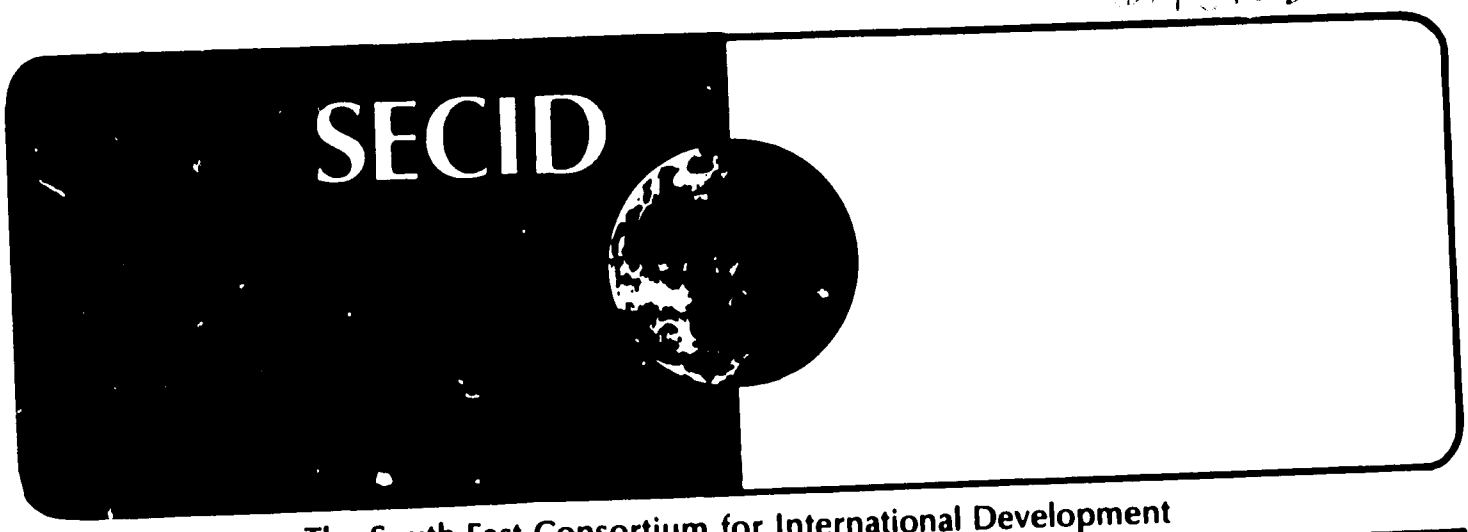


The South-East Consortium for International Development

Technical Support to Mission
AFR-0510-1-00-4007-00
Work Order No. 11
Ghana

400 Eastowne Drive • Suite 207 • Chapel Hill • North Carolina 27514

Final Evaluation Analysis
MIDAS II, Ghana Seed Company
Project No. 641-0102
Work Order #11
November, 1985

Submitted by:

Dr. C. Hunter Andrews, Seed Specialist

Contractor:
The South-East Consortium for International Development
1612 K Street, N.W.
Suite 704
Washington, D.C. 20036
(202) 429-1804

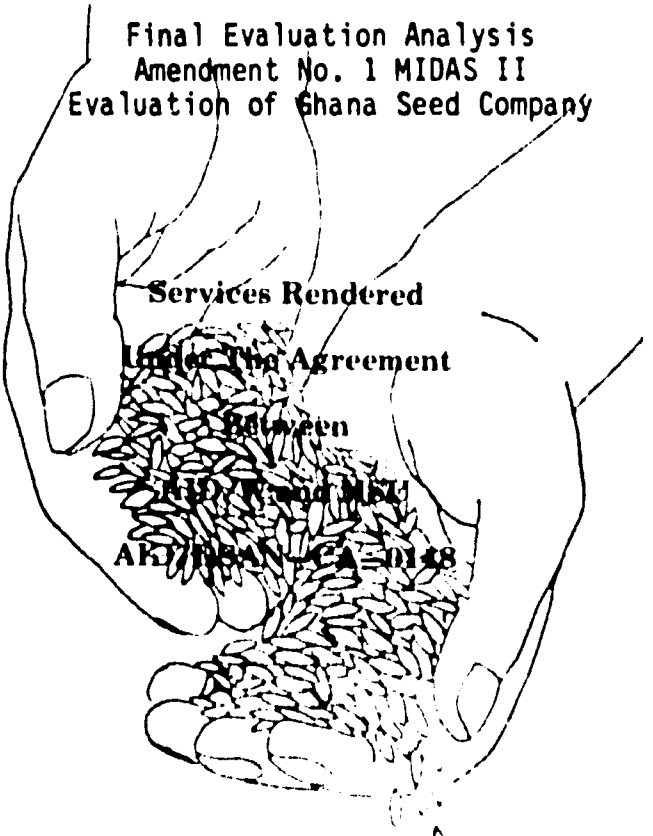
Contract No. AFR-0510-T-00-4007-00

REPORT TO:
USAID/Ghana
SECID

TA 85-6

Report to USAID/G and SECID
on

Final Evaluation Analysis
Amendment No. 1 MIDAS II
Evaluation of Ghana Seed Company



Services Rendered

Under The Agreement

Between

AID/[illegible] and MSU

AID/[illegible]-C-A-0148

November, 1985

SEED TECHNOLOGY LABORATORY
MISSISSIPPI STATE UNIVERSITY
MISSISSIPPI STATE, MISSISSIPPI

Report to USAID/G and SECID
on

Final Evaluation Analysis
Amendment No. 1 MIDAS II
Evaluation of Ghana Seed Company

Services Rendered
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Seed Technology Laboratory
Mississippi Agricultural and Forestry Experiment Station
Mississippi State University
Mississippi State, MS

November, 1985

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ACKNOWLEDGEMENTS

The consultant sincerely appreciates the assistance provided by USAID/G, especially Director William Lefes. Director Lefes arranged logistical support and provided valuable comments and suggestions which facilitated the timely completion of this assignment. The local hire personnel were very helpful and provided friendly advice and assistance in the day to day activities.

The Ghana Seed Company personnel were quite helpful in providing background data and current information concerning the company operations. Successful field trips were completed to Ho, Winneba and Tamale where the GSC staff assisted in explaining program status and objectives.

Respectfully,

C. Hunter Andrews

Report Summary

Title: Final Evaluation Analysis, Amendment No.1, MIDAS II, Evaluation of the Ghana Seed Company.

Consultant: C. Hunter Andrews
Seed Technology Laboratory, MSU

Period of Consultation: October 31 - November 17, 1985

Summary

In the mid-term evaluation of the Ghana Seed Company in January, 1985, recommendations were made extending the PACD to December, 1985 with modification in technical assistance, training and funding. Strong emphasis was outlined to secure a management accountant to assist the GSC in setting up a standardized system of accounts. Also, it was stressed that the seed plant at Winneba must be completed with excess equipment going to Tamale to strengthen that site.

This report is part of the overall evaluation team report and provides primarily the analysis of the technical competence of the GSC attained after the USAID project support for the past three years and attempts to assess the status of the GSC as a self supporting, profit making private seed company in Ghana. In addition, at the request of USAID, some alternative suggestions are considered for further support to the GSC and to the overall seed program in Ghana.

The Evaluation Team consisted of:

Mr. Eugene Rauch, Team Leader, REDSO/Abidjan
Dr. Paul Lippold, Agronomist, IITA
Mr. Lucien Stervinou, Private Sector Consultant
Mr. Seth Vordzorgbe, USAID Ag. Economist
Mr. Michael Baddoo, MFEP Consultant
Mr. Kwame Asafu-adjei, MOA Consultant
Dr. Hunter Andrews, Mississippi State Seed Specialist

Terms of Reference

The terms of reference were briefly outlined in a cable to Dr. Bill Levine, SECID. The scope of work was outlined as follows:

1. Assess technical aspects of GSC operations, production, processing, quality control and research division.
2. Assess importance of continued TA to GSC.
3. Assess training provided by the project and make recommendations
4. Assess performance of contract growers and services provided to growers.
5. Discuss aspects of setting up the Ghana Seed Inspection Service (GSIS).
6. Assess relationship of GSC to other organizations.
7. Suggest alternatives for future USAID Projects and support.

FINAL EVALUATION ANALYSIS

AMENDMENT NO. 1

PROJECT PAPER

GHANA 641-0102

MANAGED INPUTS AND DELIVERY OF AGRICULTURAL SERVICES

(MIDAS II)

I. Ghana Seed Company (GSC)

a. Historical

Since its inception, the Ghana Seed Company (GSC) has undergone a number of evaluations to ascertain the technical aspects of its operations. As early as 1975, the original MIDAS I (Phase I) identified the actual need of seed program in Ghana and therefore provided assistance to the forerunner of the GSC, the then existing seed multiplication unit (SMU) of the Ministry of Agriculture (MOA). After determining the futility of enticing foreign seed company participation in the existing seed industry in Ghana at that time, emphasis was therefore directed towards re-organizing and strengthening the SMU, its staff, facilities, equipment and financial soundness.

This project (MIDAS I) directed its efforts towards the SMU, since the basic infrastructure (staff, facilities, equipment, etc.) already existed, and it appeared both logical and feasible at that time to build upon an existing organization rather than introduce a totally new concept and component into the MOA and Gnanaian agricultural sector.

It is well documented that the implementation schedule of MIDAS I was extremely erratic with little evidence of timely achievement of

project goals. Thus, AID/W scheduled a re-design of the project which was completed in February 1980 to encompass a five year period FY 81 - FY 85. This was MIDAS II. In this re-design effort, the stability of the SMU was still recognized; however, the decision was made to create the Ghana Seed Company (GSC) in order to facilitate the organization of a semi-private, parastatal seed company in Ghana which could effectively operate completely outside the limitations of the MOA. To accompalish this and to justify continued USAID support, the complete SMU program was simply "lifted" from the MOA and technically authorized by the Government of Ghana (GOG) to function as the parastatal GSC. Thus, all personnel, equipment assets, etc. became the property of GSC which was then designed to become an effective, profit-making seed company in Ghana.

In retrospect, it could be argued that such a transformation from the public sector MOA to a parastatal GSC company might have slim chances of success given the extreme environmental and economic fluctuations (cycles) in Ghana. Especially, since the scope of the original SMU program encompassed the entire country from the far sites of the north (Bolgatanga and Tamale) through the Central region of Kumasi and finally the lower regions of Ho and Winneba. Such a vast "empire" with accessory personnel, facilities, equipment, labor, vehicles, etc. dictates a program, which under the most favorable conditions and logistical support of well developed countries and seed programs, would present extreme difficulty. So, how could one assume that in Ghana such a wide range of activities and obligations would develop on a timely schedule and with mi num problems. It should be pointed out, however, that the scope of activities in the project revision were reduced somewhat in that full support to the Ho unit was drastically reduced and only conditional

emphasis and development was outlined for Tamale. Bolgatanga was not included in the new project. At this point it was considered feasible to develop a completely new facility at Kumasi similar to the unit planned at Winneba. These decisions were made in view of some rather optimistic assumptions and fairly well-envisioned economic improvements anticipated in Ghana at that time.

MIDAS II provided for a mid-phase review which was requested in January 1983 after on-site observations by USAID monitoring revealed little progress of the MIDAS II project. Hence, in January 1983 the seed component of MIDAS II once again endured a re-design exercise in which the scope of the GSC was further reduced. It became increasingly obvious that the targeted components of the GSC, that is, Winneba, Kumasi and Tamale, would not likely achieve the desired and anticipated level of operational capacity. Thus, the re-design exercise for the seed component of MIDAS II recognized that the GSC was the sole surviving component of the multi-faceted 6-year MIDAS I and II projects which had enjoyed some reasonable progress thus far. The re-design team were still convinced of the importance of GSC and attempted to design a feasible project which would still assist the GSC in developing the institutional capacity to serve as the foundation for renewed efforts which the GOG may take to overcome its critical food shortage problem. Therefore, with these goals still in mind, the major purpose of the revised project was to improve and expand the institutional capacity of the GSC to become a viable, independent, profit making company.

The revised re-design of MIDAS II (Amendment No. 1) extended the PACD from September 30, 1983 to September 30, 1984. In addition,

Amendment No. 1 provided for a mid-project evaluation and review which occurred in February 1984. This most recent evaluation is quite explicit in its detailed review and subsequent recommendations which need not be reiterated in their entirety. However, it should be pointed out that the evaluation strongly urged the GSC to utilize all efforts in completing the long overdue facility at Winneba and to divert excess in-country equipment to Tamale to up-grade that facility in view of the futile attempt to pursue the original concept of developing the Kumasi Unit for which the equipment was originally designed. Other rather strenuous and restrictive recommendations consisted of reducing GSC activities, seeking additional donor support, concentrating on management and accounting activities and emphasizing on-site training.

Historically, this brief description brings the project to date where the current review is designed as the final evaluation of the GSC. It is in this context then, that yet another analysis of the technical aspects and operational capability of the GSC is presented.

b. Necessity of a Seed Program for Ghana

Seeds of improved varieties and hybrids are necessary to sustain a developing agricultural sector and must be available in sufficient quantities at reasonable prices and at the proper time each planting season. Planting seeds can be obtained by various methods: (1) the farmer saves his own seed; (2) the public sector (government) agencies produce and distribute seed; (3) private seed companies develop and market seed. In most advanced and well developed seed programs, the majority of seed production and distribution is handled through private sector channels. These vast seed industries are dependent to some extent,

however, upon the intensive research components of public institutions such as experiment stations, research centers and other supported public agencies who concentrate primarily on research activities to develop new strains, varieties or hybrids of improved seeds of agricultural crops. Thus, in these systems, there is a definite role recognized by both the public and private seed sector, and each entity respects and coordinates their efforts in a comprehensive seed enterprise.

In many countires of the developing world, however, seed enterprises or programs are relatively new, and seed program components and concepts are not readily put into proper perspective. Historically, incentives in developing countries are not strong enough to encourage or facilitate the development of a private sector seed component which is vitally necessary to compliment the limited government or public sector seed component. When this dual system is not in place but quite obviously there is an urgent need for a country-wide seed service (program), governments or government agencies, out of necessity, assume practically the complete responsibility for producing and distributing seeds. In Ghana, this is the case with the current seed program which has been well documented through its formative years of the early 1960's from the original Hybrid Maize Seed Production Unit (HMSPU) followed by the Improved Seed Multiplication Unit (ISMU), the Seed Multiplication Unit (SMU) and finally the Ghana Seed Company (GSC) in the late 1970's.

In these early years, the basic infrastructure for the country-wide seed program was established which consisted of an expansive network of strategic production areas complimented with traditional staffs, facilities, land and equipment which is typical of governmental programs

which border on almost social welfare agencies in size and complexity. Nevertheless, the seed program continued to survive due to the country-wide dependency upon the seed agency for necessary planting seeds. Throughout these early years, the GOG Seed Agencies maintained control and transacted ALL seed production and distribution. Of course this system emphasized the necessity for a complex production/distribution system which had rapidly developed.

In 1968, however, this expansive GOG seed agency began to exact its toll on available resources, and the seed agency (SMU) began to reduce its seed program activities. At this time some of the private sector seed growers began to contract production for the SMU.

Another view in retrospect at this time would have been for the GOG seed program to completely divert itself of any seed responsibilities beyond that of providing Foundation Seed to the private sector seed growers. This would have served a dual purpose: First, it would have reduced the scope of the GOG seed operations to a level of functional capability while still providing the vital role of initially multiplying new seedstocks (breeder seed) to a sufficient level for the next generation increase by qualified and competent private sector seed growers. Second, at this critical point in the seed development program, the responsibility could have possibly been shifted to the private sector seed growers who were eager to participate in a relatively new venture such as seed production. From all evidence it appears that the more progressive Ghanaian farmers of the era possessed the necessary skills and equipment to excell in the critical aspects of seed production compared to just routine commercial grain production.

However, this was not the case. The GOG seed program continued to assume the responsibility for both foundation and certified seed production and consequently the "in-place" facilities, staff and equipment was deemed essential. Economic conditions in Ghana continued to deteriorate, however, which eventually lead to the involvement of the documented USAID support projects to the GOG seed agencies and finally to the parastatal GSC. Thus, from the initial broad super-optimistic approach of supporting all five seed units (Winneba, Kumasi, Ho, Tamale, Bolgatanga), the USAID project support has finally been concentrated primarily in two areas, Winneba and Tamale.

Now, one can reflect over these episodes of various degrees of project successes or failures and ask if the initial approach was sound. In fact, this question has been asked a number of times. When one reviews case studies in numerous developing countries around the world, it becomes quite apparent that most countries are desirous of developing their indigenous seed programs for numerous reasons - uninterrupted seed supply, adapted varieties, protection against external pests, etc. Many donor agencies support developing seed programs or segments of them - World Bank, FAO, UNDP and others.

Here in Ghana it is adequately documented that a national seed program is necessary for the national interests of the country. Recent reports and evaluations of other donor agencies have identified and stressed the need for the continued existence and operational capability of the GSC. Primarily, the GSC should serve as the vital link between the donor - supported research programs such as the CIDA supported CRI program at Kumasi and the GGADP supported program at Nyankpala. With

such evidence in hand and with the re-newed support from the GOG, it appears that the GSC must continue to survive in some capacity to serve the vital seed supply needs in the agricultural sector.

This evaluation will attempt to identify major constraints inhibiting the effective operational capability of the GSC as a profit making seed company and will propose some viable alternatives as solutions which the USAID Mission might wish to consider for further support.

II. Technical Aspects of GSC Operations

a. Production Capability

(a) Foundation Seed Production

The production of foundation seed directly by the GSC does not appear to be a major constraint. Indeed, at times excess foundation seed is sold on the open market as food. However, this is subject to considerable variation depening upon favorable weather, adequate acreages, functional equipment and proper management. For example, in the 1983 re-design of MIDAS II it was assumed that GSC foundation seed farms had the potential of producing 2,975 bags of maize on 537 acres. However, the Experience, Incorporated (EI) Contractor's Third Annual Technical Report, March 1985, shows actual maize production of 784 bags on 387 acres. Likewise, for each of the seed kinds (rice, sorghum, groundnuts, cowpea), it consistently appears that annual projections are seldom if ever met. Table 1 gives comparisons of projected acreages and potential production compared to actual output achieved.

Thus, production shortfalls of this magnitude in anticipated foundation seed production are serious and create doubt as to the actual

TABLE I: GSC Foundation Seed Farms, acreage and production potential derived in the Amendment No. 1 to MITAS II compared to actual acreage and production extracted from 3rd Annual Technical Report of Experience, Incorporated, March 1985.

LOCATION (AREA)	MAIZE		RICE		GROUNDNUT		SORGHUM		COWPEA	
	ACRE	BAGS	ACRE	BAGS	ACRE	BAGS	ACRE	BAGS	ACRE	BAGS
WINNEBA	150 (120)	900 (250)					2	10	10 (11.5)	4000 (1.5)
KUMASI										
Kwadaso	48	240							5	1000
Ejura	120	480							4	800
	168 (102)	720 (135)							9 (2)	1800 (1.4)
TAMALE										
Nyankpala	20	120			5 (5)	30 (15)	5 (2)	15 (6)	- (8)	- (3.5)
Nabogo	20	120	100	800						
Kpome	20	120	200	1600						
	60 (65)	360 (128)	300 (260)	2400 (2182)						
BOLGATANGA										
Nasia			200 (270)	2000 (461)						
Vea	27	135					5 (4)	25 (12)		
Doba	10	50								
Tono	8	40			9 (3)	72 (15)				
	45 (0)	225 (0)								
HO										
Logba	100	700								
Asikuma	14	70								
Kpetoe										
	114 (100)	770 (271)								
TOTAL ACREAGE /PRODUCTION	537 (387)	2975 (784)	500 (530)	4400 (2643)	14 (8)	102 (30)	12 (6)	50 (18)	19 (21.5)	5800 (6.4)

NOTE: Number in parentheses are actual acreages and production extracted from E.I. Technical Report, March, 1985.

operational capability of the GSC foundation seed farms. Discussions with GSC management and EI Contractors reveal serious problems in operational capacity of equipment, farm management capability, and utilization of adequate production inputs to achieve optimum levels of seed production. See page 51 of the Third Annual Technical Report (March 1985), Experience, Inc. for detailed excuses for the disappointing maize production. It is pointed out, however, that this dismal failure was triple the production of 1984. Therefore, with such low levels of foundation seed production at the GSC foundation farms, it is difficult to project optimistic production levels in the near future considering the enormous problems of logistics and financial constraints facing the GSC. At this point it seems paramount that the GOG take immediate action to assure continued survival of the GSC.

b. Seed Processing/Storage Capability

The processing unit at Winneba appears to be completed and operational. In fact a recent technical consultant (Dr. Paul Mezynski) completed an operational check-out exercise with the facility and demonstrated plant performance from beginning to completion of the various stages. No doubt a few mechanical problems may develop which will need attention as the facility assumes full operational capacity.

This plant is designed for output capacity of 25,000 maxi-bags of maize over a 60-day harvest season. It is quite unlikely that this maximum capacity will be attained in the near future; therefore, the plant can be utilized to clean other seeds which GSC might produce such as sorghum or cowpeas. Also, the maize production from Ho is being transported to the Winneba site for drying, processing and bagging. This

will help to provide more seed and to utilize the facility to its rated capacity. The continued success of this venture depends upon available transportations.

The conditioned seed storage unit is about 20% complete. Even though emergency funds were provided by USAID in 1984 to alleviate the constraints imposed by lack of shelf items such as electrical supplies, etc. Reasons for the continued delay were not completely ascertained, however, it appears that some of the continuing problems still exist. Since the contractor has not been paid on a timely basis, no doubt that complete work stoppages have occurred.

One of the five storage compartments is functional and will hold 5000 bags of maize. This was being utilized effectively to maintain the carry-over stocks from 1984 so that the quality will be sufficiently high to permit sale for the 1986 cropping season. When fully completed, this storage facility will provide essential conditioned storage space to maintain approximately 25,000 bags of high quality seed. Urgent action must be taken to insure proper and continued maintenance of the sophisticated chilling equipment to ensure uninterrupted operation. Breakdowns and power outages which interrupt equipment operation for lengthy periods will be detrimental to seed quality.

The seed processing equipment originally ordered for the Kumasi site was moved to Tamale and installed in one of the existing warehouses. This timely move should increase the efficiency and capacity of the Tamale unit. This equipment should become operational in the near future when the electrical components are in peace. Re-positioning this

equipment was outlined in the previous evaluation in view of the reduced level of emphasis at the Kumasi site. Otherwise, the physical facilities at Tamale remain as they were in past years with the emphasis being on rice and groundnut production and processing. A small quantity of maize is handled at this site. The facilities at the Kumasi location may be the weakest in the entire program.

Even though the Kumasi site is located in an important maize producing region of Ghana, this site continues to experience difficulty in achieving anticipated seed outputs. Very little support has been provided, and the facility continues to limp along in its traditional ways. The seed storage unit which was destroyed by fire has been repaired in part; however, the anticipated completion date was not discussed. Since Kumasi was eliminated from project activities in Amendment No. 1, very little has taken place. This unit still maintains its fundamental seed activities, and prospects for improvements are not optimistic.

Little on-site improvement in production and processing capability is evident at Ho. Limited capacity still exists to dry, shell, process and store seed maize at Ho. At present the maize production is trucked 120 miles to Winneba for processing and storage. This procedure could prove effective and beneficial if the program could depend upon adequate logistical support for timely harvest of the crop and adequate transport to and from Winneba.

(b) Certified Seed Production

The bulk of certified seed production in the Ghana Seed Program is accomplished by private contract seed growers. This aspect is in jeopardy now as the growers are experiencing economic difficulty and timely payment by GSC. Reliance on the private contract growers occurred during the transformation of the SMU to the GSC when it became obvious that the SMU could not conduct the entire seed program in Ghana. Inclusion of private contract growers appeared to provide encouragement in the changing seed program in that it provided encouragement to private sector involvement in the national seed program. Seed growers were selected based upon their skills and integrity to utilize advanced production practices to ensure high quality seed. Initially, it was anticipated that seed growers would organize into regional grower associations which would promote their image as private seedsmen and possibly strengthen their position and create "spill-over" effects of improved seed to their village-farmer neighbors.

Contract seed-grower unity has not developed as originally anticipated. Problems seem to plague these certified growers similar to those experienced by GSC in their foundation seed program, i.e. lack of equipment, price fluctuations, inadequate inputs (fertilizer) and unpredictable weather. Also, since GSC has experienced a severe financial crisis, contract growers have not been paid or have been paid partially for last year's production. Nevertheless, it appears that a few of the growers may yet support the GSC program and continue to participate in the certified seed production program.

This contract seed production scheme should be looked at quite closely. Originally, it was anticipated that this arrangement would be of mutual benefit to both the GSC and the private sector seed grower. But, it appears that the growers have come to depend too heavily on the GSC services. They expect the GSC, through their internal sources and contacts, to be able to ensure fertilizer, equipment maintenance and transportation for their certified seed production. To some extent, the arrangement has worked; however, it is quite apparent that in times of economic instability and environmental stress, the GSC cannot provide these luxuries. Seed growers must be encouraged to assume more responsibility in future activities.

It appears that in good production years and under somewhat normal conditions, the GSC can secure adequate numbers growers with sufficient acreage to produce relatively large quantities of certified seed. However, unanticipated impediments and constraints frequently reduce production levels to half that projected or even less. One of the main problems with certified growers addressed in the last evaluation was that of extreme distance from the GSC unit to the grower. It was recommended that the growers be concentrated in an area no more than 20 miles from the GSC unit to minimize travel and logistical support. It was not determined if GSC had made much progress in identifying new growers in closer proximity to their regional centers. Other problems have assumed the need for more immediate attention such as problems related to seed surpluses from the 1984 bumper crop and external seed supplies brought in by donor agencies which caused drastic reduction in demand and price.

c. Quality Control Capability

Each of the designated production centers of the GSC possess the fundamental capability to assess the quality of seed produced. Primarily, this merely consists of identifying the variety and determining its germination percent. This information is printed on the seed tag and attached to each bag of seed. Some doubt has been expressed as to the quality of GSC seed. After cleaning there appears to be problems with insect infestation and seed detrioration in storage. Other complaints center around varietal mixtures.

There is little effort to perform other quality control functions such as weed seed contamination or identification and determination of other component of standard quality evaluations. With maize, rice and groundnuts, these quality aspects are of minimum importance at this time; however, if the seed program expands to other seed kinds, more intensive quality control measureas will be necessary.

d. Research Division - GSC

It is debatable whether GSC really needs a "research division" or can effectively support one. "Research" should surely be limited to breeder seed increase and rigid purification procedures. There may be some need for verification trials of imported seed to determine adapatability and pest contamination. GSC should not attempt to expand research in the area of varietal development - this is the duty of the Crops Research Institute (CRI) or the Ghana/German Agriculture Development Project (GGADP). They should not attempt to duplicate the testing and evaluation programs of the CRI and GGADP.

III. Relationship of GSC to:

(a) Extension Service

There seems to be very little interaction between the GSC and the Extension Service. Even the GSC claims that they have established their own village distribution points, since the Extension Service is almost non-functional.

This contradictory and counter-productive relationship should be resolved, for the Extension Service should play a vital role in educating the farmer - consumer about the need of good seeds. Demonstration trials are usually conducted by the Extension Service to promote good seeds and improved production practices. There appears to be little evidence of this type cooperation.

(b) Development Projects

The development projects in Ghana should provide a good stable market for GSC seeds. Programs such as VORADEP and URADEP could play a vital role in the GSC seed program.

The 1984 evaluation shows that contact with VORADEP personnel established a positive reaction for the purchase of GSC seeds. In addition, there was a general consensus that even VORADEP funds could be made available for establishing drying facilities in the Ho region.

These amicable relationships with VORADEP have failed to materialize. Even though contacts by this evaluation group revealed an apparent willingness to maintain coordination with VORADEP, some method of top-level management agreements must be devised. Although the URADEP

program was not observed, comments from various "authoritative" individuals indicated that better cooperation and coordination existed between this development project and the upper region GSC offices at Bolgatanga. However, the Area Manager from Bolgatanga indicated that all is not as "rosy" as led to believe.

IV. ESTABLISHMENT OF SEED INSPECTORATE - GHANA SEED INSPECTION SERVICE

The Ghana Seed Inspection Service (GSIS) was one of the original components of the seed program under MIDAS I and II. The GSIS was envisioned as the agency which would provide inspection, testing, and other quality control measures to standardize all facets of the diversified seed program in Ghana. Even though the TA contract with E.I. provided one long term consultant (Dr. Bill Hall) to assist in the establishment of the GSIS and aid in subsequent organization and training, adequate host country support failed to materialize to support this program. Consequently, after two years, the services of Dr. Hall were terminated, and the fate of the GSIS remained rather uncertain. This evaluation determined some renewed efforts on the part of the GOG to revive the GSIS concept, and there remains a distinct possibility that official action, in fact, may be forthcoming to authorize formation of this agency.

It is appropriate to look at some alternative concepts of seed inspection, certification and regulatory services. A seed regulatory branch, usualy called the official seed testing laboratory, is most often a public-sector government agency which has the responsibility of testing seed produced and offered for sale within a state or geographical region. This system can be expanded to a country-wide program in which

case it would be organized dat the federal level. In utilizing this concept, seed testing laboratories are established, either at the state (district or regional) level or at the federal (country-wide) level for the sole purpose of performing quality evaluation tests, such as seed moisture determination, purity and germination tests, weed seed contamination, and other tests deemed neoessary. In regulatory control work, seed testing laboratories are governed by seed laws and regulations which define seed of various crops and set forth guidelines and procedures for standardizing seed qulity. In regulatory conrol testing, there is no field inspection, only laboratory evaluatios to ensure that seed has been properly labeled and is represented fairly to the consumer. This is frequently called "TRUTH-IN-LABELING". The laboratories receive seed samples from other seed inspectors or agencies for testing and quality evaluation. Federal laboratories can do similar tasks, but usually serve as verification agencies when questions arise at lower levels. Federal labs also check imported seed for proper standards, and for insect or disease infestation.

Now, if the seed testing laboratories only perform quality tests, some provision must be made to provide inspectors to go out into the commercial seed trade to take seed samples. Here again, these inspectors are usually provided for by the government agency along with their other inspection services. These individuals do not physically inspect seed production fields but merely visit seed outlets and take samples of seed which is already in commercial channels. The samples are either taken to the official regulatory laboratory or sent by some means. Thus, these two activities usually make up the official governmental testing and regulatory services provided to the overall seed program.

Yet another facet of a seed program is that of seed certification. Many states, regions or possibly even countries set up certification programs which inspect and sample just that portion of seed which is being certified. Seed Certification means progeny verification (pedigree) through a limited generation system of seed multiplication. This agency operates independently from government intervention and services those individual seedsmen or agencies who desire to certify their seed. This then, means that there can be both certified and non-certified seed passing in commercial markets. Certification verifies regulations and quality standards under the certification system; whereas, non-certification implies standards applicable to all seeds in the market place. Bear in mind that seed laws and regulations govern all seed - certified and non-certified - while certification regulations apply to only certified seed. A seed certification program is usually organized as a growers cooperative, strictly voluntary to those persons (agencies) capable of producing very high quality seed. The certification agency is a service organization with a management director and accessory field inspectors and office personnel to perform detailed activities. Growers records of crops, acreages and class of seed produced are maintained in the office, while the inspectors visit the production farms to verify isolation, absence of weeds and off-type plants and inspect equipment and storage for complete cleanliness. This is a service oriented program paid for by those seedsmen who participate in it.

In many newly developing seed programs, it is difficult to put into place in an efficient manner all of these separate components of a seed inspection, testing and regulatory control system. One usually looks for

a workable system within an existing infrastructure. But it must also be recognized and emphasized that an inspection/testing program must be organized within certain limits and guided in its development along those paths which have already proven successful.

In Ghana, there has only been superficial talk about the need and role of a seed inspection program. An it appears highly unlikely that a diversified system just previously described can be established in the immediate future. At best there appears to be mounting support for establishing a Ghana Seed Inspection Service (GSIS) or a Seed Inspectorate Department. In fact, such a plan was conceived under MIDAS I, II, and the E.I. Consultant (Dr. Bill Hall) was brought on board to assist in the formation of GSIS and to guide its operational scope and development. As the GSIS failed to emerge, however, Dr. Hall was terminated in 1984, and support for the GSIS program was withdrawn.

If the GOG does, in fact, revive the Seed Inspectorate (GSIS) concept, then extreme caution must be utilized in directing this agency in the proper scope of activities and organizational structure. Otherwise, it stands to reason that yet another massive governmental agency may be created with a typical headquarters in Accra and widespread regional offices, accompanying staff, equipment and vehicles which the GOG just cannot adequately support. Thus, the program must be established on a rather moderate scale with absolute minimum personnel and equipment to prevent the proliferation in size and logistical requirements.

The organizational concept which appears to prevail in Ghana is one where the Seed Inspectorate (GSIS) will perform a combination of duties - (1) on site field inspections to ensure proper production, harvesting and handling techniques; (2) sampling seed possibly at production sites and distribution centers for quality evaluation; and (3) laboratory testing to establish quality standards. If, in fact, these are the basic functions of the Inspectorate, then one can imagine that a fairly large organization with highly specialized qualified personnel will be necessary. In any event, this agency should function freely from government intervention and political influence and should administer policy and regulations to all segments of the seed program with a completely impartial view. Favoritism or relaxing standards will rapidly reduce consumer confidence.

An apparent view-point held by many segments of the Ghanaian seed program concerning the role and effectiveness of a seed inspectorate (GSIS) should be clarified. Of those agencies (persons, farmers, CRI, GGADP, GSC) interviewed, the general opinion is that the formation of a seed inspectorate (GSIS) will almost immediately resolve some of the major problems facing the seed program today - GSC will be free from testing their own seed, seedgrowers (and other consumers) will be assured of high qulaity seed without admixtures, Ejura Farms will produce the same quality seed, CRI and GGADP will have their Breeder Seed multiplied successfully, and various imported seed supplies will be tested for quality and pest contamination. Granted, all of these aspects are ideal, but just the formation of a Seed Inspectorate will not perform <u>miracles</u> nor will it be a <u>panacea</u>. Proper training, adequate equipment and facilities and sufficient mobility are essential to effectively implement

a seed inspection - regulatory program.

One centrally located official laboratory properly equipped with adequately trained seed analysts could perform the routine seed quality evaluation for all seed samples throughtout the country. Each region could have one inspector to visit production farms and take samples from GSC operations, private seed growers, seed outlets (FASCOM), Ejura Farms, etc. Considering this approach, it could be feasible of establishing the central seed testing lab at UST in Kumasi consisting of no more than seven fulltime staff (part-time in busy seasons) to perform seed quality tests. A maximum of nine regional inspectors could perform on site production inspections and take seed samples to send to the central lab. The GOG would have to provide budget support to the entire agency; however, some supplemental support could be derived from service charges for inspection and testing.

Programs similar in structure and scope have proven effective in numerous countries, and it is quite common for an efficient program to test 15,000 - 25,000 samples each year. Likewise, field inspectors should be capable of handling all production acreages in their region.

V. IMPORTANCE OF CONTINUED TECHNICAL ASSISTANCE TO GSC

Historical evidence supported by current evaluations indicate that the GSC, or some similar program, is essential for any likelihood of success in a Ghanaian seed program. Evident from evaluations of other donor projects in Ghana (CIDA, GGADP) suggest that the GSC should provide the logical link between such research and development programs and the remaining seed sector and finally the farmer-consumer. Also, other donor

programs (VORADEP, URADEP, NORRIP) still favor continuing the GSC program. Even the high administrative echelons of the GOG stress the necessity of the GSC. However, one wonders why the program continues to experience adversity in view of such widespread support. One can speculate that a series of highly unsuspected and detrimental events occurred simultaneously in Ghana to precipitate the current disorganized state of affairs for the GSC. Leading this array of events is probably the disastrous drought of 1982-83 which first of all depleted all sources of indigenous seed (and food) supplies in Ghana followed by the bountiful rains in 1984 which enabled a surplus production of seeds and food. As a result, prices first of harvest. In addition, outside sources of seed and grain tended to destabilize the market.

The GSC was neither prepared for nor had it planned for such unexpected events. And, considering that the GSC was a newly formed parastatal enterprise facing a multitude of existing problems, no doubt such a series of totally unexpected disasters was more than it could handle. However, such cyclic events occur quite frequently, and proper management and planning tends to minimize the effects.

It seems quite likely that for the GSC to survive in its present form, some major re-structuring and organizational changes must be addressed. Stringent management programs and decisions must be imposed, more coordination among cooperating programs is obviously essential and strict cost-cutting and cost-effective measures must be enforced. Otherwise, it appears that the GSC will revert back to the antiquated and inefficient system imposed during the days of the MOA/SMU program.

In light of these considerations, it appears that USAID could find reason to continue to support the GSC (or some segment). There is reason to believe that such support can prove beneficial to Ghana and lead to stability in food production for the Ghanaian people. However, the continuation of technical assistance to the GSC will depend upon the intention of the GOG and their willingness to define their priorities and to assure adequate support.

Before analyzing possible types and areas of support to the GSC, it may be appropriate to enumerate the positive actions taken by the GSC in recent times of stress:

1. The number of employees reduced from 1000 to 370.
2. Consolidation of activities at some of the foundation seed farms.
3. Installation of excess processing equipment at the Tamale site.
4. Repair of the storage unit at Kumasi.
5. Securing emergency bank loan.

Of course much room for improvement remains in order for GSC to achieve the original purpose of becoming a viable, independent, profit-making company. The challenge remains with USAID, therefore, to find alternative means to facilitate the achievement of such project goals.

VI. POSSIBLE TECHNICAL ASSISTANCE ALTERNATIVE

(a) Management Contract with a U.S. Seed Company

This alternative is of considerable merit in that an appropriate management team could provide the expert guidance and advice necessary to re-structure the GSC into a streamlined company capable of developing institutional strength and profitability. Such a management team would consist of an experienced general manager in private seed enterprise, a technical seed specialist in production and processing and a well trained and experienced person in accounting practices and record keeping. As a preparatory measure, USAID may wish to consider securing the services of an experienced seed industry representative from the U.S. to assess the likelihood of success of a management contract. The details of such an approach would require negotiations, but there is little doubt that such a management approach would necessitate a considerable amount of decisive authority by the management group. Otherwise there may be little change.

(b) Support of Seed Inspection Service

This component was originally included in MIDAS I and II and was justified on the basis that complete seed programs include such activities. In the case of Ghana, however, support for an inspection service was terminated when it became apparent that the GOG was not in a position to identify and support this program.

If the GOG does issue official support, then USAID support could well be directed to reinforcing this agency. A fairly detailed explanation of various approaches to seed inspection and regulatory practices have been provided in the section on development of the GSIS.

Since various alternatives are presented, USAID must utilize caution in supporting the best alternative.

It is advisable, therefore, to secure the services of a qualified consultant in the area of inspection - regulatory control to study the actual situation in Ghana and to devise an appropriate orgnaizational scheme, staffing pattern and institutional development approach. No doubt there will be need for some limited support in equipment and supplies to initiate a successful inspection - regulatory agency.

(c) In-Country Training

MIDAS II identified the need of in-country training for GSC personnel at the Winneba seed plant after it become operational. This training course was originally planned for February 1984; however, it was postponed due to the delay in completing the Winneba plant. Now, conditions may be appropriate to support this activity. Consistent with program activities in other countries, the MSU contract usually provides two seed specialists for a two week training program. Travel, per diem, in-country logistics would be necessary for the MSU team, and arrangements for the participants (housing, travel, per diem) will have to be arranged. If this course does materialize, then attendance should be limited to no more than 20 participants.

VII. UPDATE PERFORMANCE OF GSC

The Ghana Seed Company (GSC) has operated with some degree of autonomy; however, inherent managerial weaknesses are still influenced by traditional Ministry of Agriculture (MOA) policies which impede rapid progress necessary for a financially viable enterprises. The inherent

weaknesses in the organization are apparent to the present GSC management as well as USAID/Ghana. These weaknesses may be overcome by re-structuring management policy, attempts at more privatization, and possible joint-venture arrangements. (See Appendix I).

Previous USAID assistance under MIDAS I and II brought the GSC to a point where its technical competence was established. GSC now has one of the largest and most modern seed processing plants in West Africa and a network of experienced contract seed growers. The GSC has a core of technically trained personnel capable of operating a diversified seed comapny and providing training to personnel under their direct supervision. With these essential components in place, the major responsibilities of the GSC will be to develop policies and practices which will encourage private sector participation so that the GSC will develop the capability to operate on a commercial basis and attract investment for continued growth.

RECOMMENDATIONS FOR GSC

1. Promote your own image to impress your clientele. Clean up your premises, remove unused and unusable "junk". Landscape the premises, plant flowers, shrubs and ornamentals. Provide your workers with brooms to clean building and offices. Orderly and neat arrangement of supplies and materials is essential.

2. Similar actions are essential for the regional sites. It appears that servioeable equipment remains unprotected, while discarded derelicts occupy precious space.

3. Improve maintenance and repair facilities and capability. In view of limited spares, urgent action in needed to develop functional repair and maintenance capability.

4. Coordinate and promote seed sales with VORADEP, URADEP, NORRIP and any other possible seed outlets.

5. Attempts to strengthen the GSC sales program.

6. Continue to meet with contract growers to promote more self-discipline and independence. Encourage stronger grower - associations and embark on grower and consumer educational programs.

7. If possible, attempt to re-establish cooperation with the existing extension service components. This could prove vitally effective in education and promotion campaigns.

8. Attempts to obtain the earmarked VORADEP funds to support drying facilities at the Ho regional site.

9. Seek possible in-country investments to assist in privatization concept. Ascertain the intentions and interest of private seed growers to invest in the GSC.

10. Strive to cut operating costs by streamlining operations, consolidating activities, reducing excessive staff and improving overall management and accounting practices (See Annex I).

VIII. BASIC CONSIDERATIONS FOR ESTABLISHING AND SEED PRODUCTION AN SUPPLY SYSTEM (A COMPANY) WITHIN THE PRIVATE SECTOR

Assume that the GOG is interested in establishing a seed company, within the private sector. Their purpose could be to ensure an adequate supply of seed of superior varieties for continued advancement of

also receive support from the National Development Bank, Social Security Bank, Ministry of Agriculture and other sources promoting private or semi-private enterprises. The GOG may also reassert their interest by updating the national seed law and by enacting proper documentation to facilitate the formation of a seed inspection service. All of these attitudes are most refreshing considering the usual antiprivate sector philosophy (in seed production and supply, at least) which historically prevails in many developing countries.

Assume again that the GOG is especially interested in the participation of a U.S. seed company in seed production and supply, possibly in a joint venture, under franchise, or some other mutually agreeable arrangement. Then what will be the conditions for a joint private seed company - GOG venture?

GOVERNMENT ATTITUDE

1. The release of varieties, the production and maintenance of foundation seed and the production of commercial seed can be controlled or severely restricted by government officials even through government policies in general may be most favorable. For example:

a) certification and performance testing before recommendation may be voluntary, but in practice they turn out to be mandatory.

b) extension services and credit organizations may recommend certified seed, or they may positively prevent the sale of other seeds.

c) the release of varieties from the private sector may be delayed by seed committees composed primarily of government research workers.

d) maintaining subsidized or partly subsidized government or quasi-government programs which would effectively determine prices.

e) a National Seed Committee will determine or fix the price of certified seed.

PRIVATE COMPANY ATTITUDE

(a) Seed Company will desire to market its own products without hindrance through some kind of indirect control.

(b) GOG policy towards foreign investment. Attitudes and regulations governing foreign investment would determine whether a company would prefer a joint venture, a franchise arrangement or some form of technical aid and assistance contract.

(c) Availability of qualified personnel in the international area to supervise ventures during their critical years of establishment.

(d) Assurances from the GOG that it will not dictate the economic terms of operation.

(e) Hybrid seed production whenever possible to increase yields and create market demand.

Annex A

Evaluation Team Itinerary

Date	Day	Time	Activity	Location
11/2	Saturday	0700	Arrive in Ghana	Director
11/3	Sunday		Discussion	Director
11/4	Monday	0800	USAID Briefing	USAID
11/5	Tuesday	0800	USAID Briefing	USAID
		1430	GSC & EI personnel	GSC
11/6	Wednesday	0830	CIDA - Cam Bowes	Canadian Program
		1000	Frank Meyke	FRG Embassy
		1100	Sec. Agric.	MOA
		1200	Chief Executive	Ghana Inv. Center
		1430	Prof. E.V. Doku	Univ. Ghana
		1600	Seed Inspectorate	G.S.C.
11/7	Thursday	0830	Winneba	Winneba
11/8	Friday	0700	HO	Ho
11/9	Saturday	0800	First Draft	USAID
11/10	Sunday	0800	First Draft	USAID
11/11	Monday	0945	Depart for Tamale	Tamale
11/12	Tuesday	0800	GSC Area Mgr.	GSC
		1000	GGADP	Nyankpala
		1430	NORRIP	NORRIP
		1500	GSC Area Site	GSC
11/13	Wednesday	0730	Depart for Accra	
		1200	USAID Office	USAID
11/14	Thursday	0800	Final Draft	USAID
11/15	Friday	0800	Final Draft	USAID
11/16	Saturday	0800	Depart Accra	
11/17	Sunday	1800	Arrive MSU	

T.C. Luche, AFR/CCWA RM 2664 NS -31

ANNEX B

202-632-7996

Ghana Seed Company Privatization and Expansion

641-0110

Duration of Project: FY 1987-1989 LOP Funding: $4 million (G)
Appropriation: ARDN FY 1987 Funding: $1.5 million (G)

Purpose: To improve the management and service capacity of the Ghana Seed Company and to improve its ability to produce improved, non-seed, planting materials to increase domestic agricultural production.

Statement of Problem: While the Ghana Seed Company, GSC, has operated with a surprising degree of autonomy for a parastatal, its long-term prospects to become a viable, self-financing enterprise have been periodically threatened by under-capitalization and inherent management weaknesses, especially in the areas of financial management. Its staff, many of whom were transferred intact from the Ministry of Agriculture's Seed Production Unit, still operate in ways at odds with the managerial and decision-making processes needed by financially viable enterprises. Although its role in the day-to-day operations is decreasing, the Ghanaian Government practices, including salary scales, still dominate the organization. In spite of its ability to cope with the disruptive effects of the 1983 drought and the unexpected 1984 corn surplus, the inherent weaknesses in the organization became apparent to GSC's management as well as USAID/Ghana. These weaknesses can be overcome by the increased privatization, including joint-venture arrangements. This change in operation will not only add to productivity and cost consciousness but also provide additional capital, through equity participation.

GSC's current production, mostly certified corn seed, has long range development potential not only for increasing Ghana's domestic production but also for increasing the country's role as an important food grain supplier for neighboring countries. Most acreage in Ghana is, however, devoted to other food crops, cassava, plantains, and yams, which make up the largest percentage of food consumed in the Ghanaian diet. There have been advances in the development of improved varieties, particularly with respect to disease and pest resistance, which are expected to significantly increase yields but which have not, as yet, been introduced to Ghanaian farmers. Vegetable oil seeds, mostly peanuts, are being produced in only limited quantities. The provision of additional varieties, for domestic consumption, animal feed, and agro-industry, is needed.

GSC has certain assets that make it attractive to private sector investors, both local and foreign. Included among these assets are the largest and most modern seed processing plant in West Africa and a network of experienced contract certified seed farmers that can readily be expanded. GSC has a role that will be increasingly valued as Ghana moves toward being a net corn exporter. GSC now has the opportunity to become a seed exporter to other countries in the West Africa region. Previous AID assistance under the MIDAS II project brought GSC to the point where its technical competence is established, it has a seed production system that works, and is quality. Now, improved planting material production systems will, however, have to be developed

capable of producing seed of a predictable

and, whether or not they are added,

for non-seed crops. The issue is whether or not new production lines are added to increase the productivity and efficiency of the organization as an enterprise to satisfy market demand at the lowest cost to the farmer, while giving GSC the financial and managerial resources to operate in a varying physical and economic environment. USAID/Ghana believes that the presently evolving GOG policies and practices toward the private sector will encourage private participation in GSC before the end of the design for this project.

Proposed Means of Dealing with the Problem: The mainstay of USAID/Ghana's involvement in the agricultural sector during the past few years has been working with the GSC to improve seed availability. Project assistance was limited to this area because other interventions in the sector were found to be susceptible to failure because of the difficult economic, and later political, environment that existed in the early 1980's. Assistance to the Seed Company was found to be, in many respects, more easy to implement and less affected by infrastructure constraints. In addition, USAID/Ghana's role in agricultural production, food, is recognized and sanctioned by the GOG and other donors. Although USAID presently contributes to the agriculture sector, e.g. program assistance and local currency support for storage development, and plans to develop other activities, e.g. agricultural statistical analysis, it intends to concentrate its limited project portfolio on an institution it knows and where it has substantial prior experience.

USAID/Ghana proposes that a grant be made to the GSC for the following purposes:

to finance a management contract with a U.S. seed company that will accept, subject to certain conditions, e.g. investment guarantees and managerial freedom, to invest in the GSC to an amount at least equal in value to its management contract over the life of the project. Profits under the management contract would be paid in part in equity shares in the GSC.

Dekalb - Pioneer -

to manage and operate GSC under the terms of its contract for at least three years,

to develop a plan for GSC to attract other private investors,

to continue and expand GSC's current production lines.

to experiment and adapt other seeds and planting materials so as to determine their future use and profitability,

to assess the long term export potential for GSC's production.

The majority of the project funds will be devoted to the management contract with the balance used to fund the costs associated with the development of new production. The project is foreseen as the precursor to GSC's eventually becoming a private company or entering into a

joint-venture relationship with a private company. A major output of the project will be the determination as to whether or not GSC can operate on a purely commercial basis and attract investment for further growth.

Host Country Entities: The GSC, a GOG owned but independently operated entity, engaged in seed multiplication and distribution and other private investors operating in Ghana.

Target Group: The immediate beneficiary of the project will be the GSC. Indirect beneficiaries will be the agricultural producers, especially small farmers, who produce most of Ghana's food crops and who will be able to increase their production levels through the use of improved seeds and plant varieties.

Major Issues to be Addressed During Project Development:

(1) The institutional strength and profitability of the GSC.

(2) GOG policies with respect to private investment and the "privatization" of parastatals and the Investment Code.

(3) The receptivity of U.S. seed companies or other investors in association with seed companies to the terms of their participation in the project.

(4) The appropriate level of funding and duration of the project. These will have to be addressed during the PID and PP design stages.

(5) The level and type of USAID staffing and oversight requirements. The Mission believes this project can be implemented with the present level of USDH staff.

(6) The location of the project's approval authority. The Mission recommends that the approval authority for both the PID and PP rest with it and REDSO/WCA.