



THE MALAWI AGRICULTURAL RESEARCH PROJECT
IS AN EXAMPLE OF THE DIFFICULTY AID
EXPERIENCES IN GETTING A PROJECT STARTED

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EXECUTIVE SUMMARY

Introduction

The Agricultural Research Project (No. 612-0202) is to increase agricultural production and real income of smallholders. The project purpose is to strengthen the capability of the Department of Agricultural Research [within the Government of Malawi (GOM) Ministry of Agriculture and Natural Resources] to provide socially acceptable and economically sound research for smallholder needs in satisfactory quality and quantity, and in a form usable by the extension service.

The project began on August 28, 1979, and is expected to be completed by November 30, 1984. Planned AID financing over the life of the grant project is \$9 million. Disbursements at June 30, 1982 totalled \$2,025,000. The GOM through its Ministry of Agriculture is contributing \$1,403,700 of project inputs, representing a 13.5 percent project contribution. A waiver was received for the 25 percent host country contribution required by Section 110(a) of the Foreign Assistance Act.

Purpose and Scope

The purpose of our review was to determine the effectiveness of implementation and management of the project, to verify compliance with laws and regulations, and to identify and report on significant problem areas. We reviewed project records, held discussions with project personnel, and visited the project site at Chitedze.

Findings, Conclusions and Recommendations

Progress had been made toward achieving planned outputs, but the project was behind schedule because of delays in fielding the contract team. Considering that five of the seven technical advisors had been in Malawi for less than one year, progress to date was adequate but fell short of planned goals (page 18).

The major areas which need to be addressed by AAO/Malawi and certain AID/Washington offices are capsulated below:

- There is a need to share research results. We found that project personnel were not aware of what was going on on other research projects in Africa (pages 3 to 5).
- Project planning documents did not clearly define objectives or outputs to be accomplished within a specified timeframe; nor were they expressed in quantitative terms which could be measured. This lack of output definition was further exacerbated

by the fact that progress reports were not result oriented, and detailed work plans were lacking (pages 5 to 7).

- The scheduling of participant training will not provide maximum benefit to the project because many of the participants will not have an opportunity to work with the technical assistance team (pages 7).
- The project did not provide a basis to disseminate research results to the farmers. The GOM extension system clearly lagged behind the agricultural research system, and this gap will widen as the current research project produces new results (pages 8 and 9).
- The University of Florida (UF) did not field a contract team that satisfied project requirements, and did not give adequate orientation to the contract team to assure it had sufficient knowledge of AID regulations to operate effectively and efficiently (pages 9 and 10).
- UF provided staff who did not have required qualifications. Recent audits of other projects had also disclosed instances where the failure to field a qualified contract team on time caused implementation delays (pages 10 to 12).
- The UF contract team was not responsive to AAO/Malawi requests for information in the areas of commodity receiving reports, contractor progress reports, and detailed, time-phased work plans (pages 12 to 14).
- Short term technicians were not providing a report to AAO/Malawi on what was done or accomplished, and how it contributed to the overall goals of the project. The project should make more effective use of these technicians. It did not appear that all the short term consultants provided by UF were necessary (pages 14 and 15).
- If a follow-on project is implemented, an opportunity exists to make it more cost effective by utilizing returned participants and short term technical assistance rather than a full time staff of long term contract technicians (pages 15 to 17).
- An investigation, conducted primarily by the GOM, REDSO/EA, RFMC and an AID regional legal advisor found that A.S.R. Multi-construction (ASR) Inc. was in breach of the nationality, source and cargo preference clause of the contract. At the conclusion of the investigation, ASR was allowed a time period to rectify and comply with the terms of the contract. In our opinion, the method used to adjust the contract for ineligible costs was reasonable (page 18 and 19).

The report contains nine recommendations to remedy the weaknesses noted above.

At the conclusion of our review, an exit conference was held with AAO/Malawi to discuss our findings. A final draft report was also provided to AAO/Malawi for their written comments. In addition, portions of the draft report were provided to REDSO/EA, REDSO/WA, M/FM and M/SER/CI for their comments. We have included comments received from these offices in this report, as considered necessary.

Portions of our draft report were also provided to PPC/E, BIFAD/S and AFR/TR. These offices did not respond to our draft report.

BACKGROUND

Independent Malawi was created from the Federation of Rhodesia and Nyasaland in 1964; and in 1966, became the Republic of Malawi. Malawi is bordered on the East, South and Southeast by Mozambique; on the West by Zambia; and the North by Tanzania. It extends north to south for 520 miles with width varying from 50 to 100 miles. Its total area is 45,747 square miles, of which 9,300 square miles are lakes and 36,447 square miles are land area.

Malawi's economic resource endowment consists of moderately fertile soil, substantial water resources, a climate favorable to crop production, and an industrious and economically responsive population. Malawi has a minimally adequate food supply and a varied range of export crops. About 85 to 90 percent of the population is engaged in agriculture, most of which is in smallholder farming.

A 1977 population survey showed a total population of 5.6 million, with an annual compound growth rate of 2.9 percent -- the population density is among the highest in Africa. According to the 1977 survey, eight percent of the population was urban. Blantyre, the commercial center, accounts for almost 50 percent of the urban population. Lilongwe, the newly established capital, has emerged as another major urban concentration with 20 percent of the urban population. Rural-urban migration has not been a significant factor in Malawi.

Agriculture is the core of the Malawian economy. The sector employs about 85 percent of the Malawian population, and provides approximately 90 percent of exports and 45 percent of Gross Domestic Product (GDP). Except for 1980, the agriculture sector has produced virtually all of Malawi's food requirements. However, the combination of expanding population and the stresses such expansion places on limited soil resources, has given rise to the projection that slowly declining yields will lead to a maize deficiency of 120,000 tons by 1990 ^{1/}. The AID program in Malawi is attempting to assist the agriculture sector by providing funds for the Bunda College of Agriculture, agriculture research, and rural water supplies.

^{1/} World Bank, "Malawi: Key Issues in Agricultural Development," 1980, Pages 47-48.

A program of economic austerity is in place in Malawi and has succeeded in reducing the trade gap, which at Kwacha 58 million (\$53.2 million) for the year ended February 1982, was 48 percent lower than the previous year. Exports need to be improved if imports are not further reduced. The Government of Malawi (GOM) has reduced spending to help reduce the trade gap, although at a cost to the growth of the economy as a whole. The economy continues to be under the scrutiny of the World Bank, which has demanded cutbacks in spending as a condition for loans.

The Agricultural Research Project (No. 612-0202) began on August 28, 1979, with a Project Assistance Completion Date of November 30, 1984. Planned AID financing over the life of the grant project is \$9 million. The GOM through its Ministry of Agriculture is contributing \$1,403,700 of project inputs, representing a 13.5 percent project contribution. A waiver was received for the 25 percent host country contribution required by Section 110(a) of the Foreign Assistance Act.

The goal of the Agricultural Research Project is to increase agricultural production and real incomes of smallholders. The project purpose is to strengthen the capability of the Department of Agricultural Research (within the Ministry of Agriculture and Natural Resources) to provide socially acceptable and economically sound research for smallholder needs in satisfactory quality and quantity, and in a form usable by the extension service.

Planned project outputs include:

- New operations established in (a) farming systems, (b) production economics and smallholder program research, (c) research coordination, and (d) research/extension liaison.
- Thirty-three research personnel trained and functioning at the M.S. and Ph.D. skills level.
- Adequate facilities and houses constructed, including 48 staff houses and three laboratories.
- Improved support staff capability through on the job and in-service training.
- Field trials completed in 110-130 Extension Planning Areas and on smallholder farms to demonstrate applicable research recommendations.

The technical assistance team of specialists in agriculture for the implementation of the project came from the University of Florida under a \$6.2 million contract (No. AID/afr-C-1653), dated May 30, 1980. Construction for the project was done by force account, and a Kwacha 1.120 million (\$1.009 million) host country contract.

PURPOSE AND SCOPE

The purpose of our audit was to determine whether (a) the implementing agency of the GOM effectively and efficiently used AID-provided resources; (b) applicable laws and AID regulations were complied with; (c) the project was meeting its objectives as stated in project documentation; (d) AID funds were being properly spent; (e) the contractor, the University of Florida, performed satisfactorily and operated within the provisions of the contract; and (f) AAO/Malawi gave adequate supervision to the project.

We reviewed AAO/Malawi, host government and contractor records, reports and correspondence; and held discussions with AAO/Malawi, GOM and contractor officials. We also made field trips to the project site at Chitedze. Disbursements at June 30, 1982 totalled \$2.025 million.

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

There Is A Need To Share Agricultural Research Results

There are fourteen agriculture research projects budgeted at \$162 million now underway in ten countries in Eastern Africa. These projects are either managed or technically assisted by REDSO/EA. There are also AID agriculture research projects in other developing countries within Africa. Some of these projects are doing work in similar climates, under similar conditions, and in the same livestock and cropping areas.

In this review and others, we have found that there is almost no communication or coordination among these agriculture research projects. Common implementation problems exist -- difficulties in fielding qualified teams in Malawi and Sudan; timing problems in the participant training components in Malawi and Morocco. These common problems should be shared so lessons learned can be used to improve projects. Although research is being done on the same crops, there does not appear to be a methodology to share new techniques. We do not believe countries in Africa can afford to continuously "reinvent the wheel".

Staff at AAO/Malawi, and the UF contract team, believe that project implementation could benefit through better communication among projects. The General Accounting Office also reached this conclusion in an audit report issued October 16, 1981, entitled, "AID And Universities Have Yet To Forge An Effective Partnership To Combat World Food Problems." The report stated AID agricultural research activities are fragmented and without adequate direction.

and that AID could more effectively use its research activities if it combined all research components into a systematic and integrated program.

An August 16, 1982 letter from an AID Assistant Administrator to USAID Directors refers to a "Common Theme Network Approach", and discusses education interventions that have been developed through collaboration among donors and implemented in several countries. The letter refers to other technology areas in which AID's approach can be made more efficient and cost effective by working together. We believe agriculture research is one such area.

For example, the Malawi Agricultural Research project is making extensive use of mini-computers to analyze research data, to assist in making decisions regarding the numbers and locations of field trials, and for administrative support. The project has designed software that can produce special cost reports, procurement source and origin reports, and inventory records. Other research projects could benefit from these software programs and simplified project administrative techniques.

Conclusion, REDSO/EA Comments, and RIG/A/N Response

AID projects can be more efficiently implemented if project officials share lessons learned through a system of formalized communication. We agree with GAO that better coordination of agriculture research projects can be achieved.

REDSO/EA Comments

"AFR/TR, AFR/RA and REDSO/EA have been concerned for the last three years with the problem of how to coordinate agricultural research, methodologies, problems and results. To alleviate this problem of communication and coordination, among universities, contractors and recipient countries, REDSO/EA and the Bureau for Africa have developed a project called Farming Systems Research activities in East and Southern Africa (Project No. 698-0444). This project is being implemented by CIMMYT/EA. The purpose of the project is to provide networking among cooperating national programs, training in participating countries, assistance with on-farm research in nine countries, and in institutionalizing the on-farm research process, all in support of USAID efforts to build appropriate research and extension systems in East and Southern Africa.

While the implementation of the project is just getting underway, we believe it will provide a mechanism for sharing lessons learned through a series of national and international meetings and seminars. Coordination of agricultural research and extension activities in East and Southern Africa being supported by AID will be achieved through the medium of CIMMYT, the implementing institution. REDSO/EA is charged with monitoring the implementation of the project.

Secondly, the Bureau for Africa has been actively involved over the past five years in developing an informal association of seven countries (U.K., France, Belgium, Germany, Italy, Canada and U.S.) for the purpose of providing joint support for agricultural research and extension activities, review and formulate policy and take such actions as necessary to facilitate cooperative endeavors. This informal association of countries operates under the title 'Cooperation for Development in Africa (CDA).' In view of these two major efforts, we believe REDSO/EA and the Bureau for Africa are taking key steps to provide for full communication and coordination of agricultural research and extension among U.S. contractors and AID recipient countries."

RIG/A/N Response

Although we were not able to observe the effect of the effort, we agree these are positive steps and will address our concern; therefore, we have deleted the recommendation of our draft report to develop a methodology for coordinating and funding the sharing of research methodologies, problems, systems and results among the many research projects in Africa.

Implementation Hindered By Deficiencies In Project Design

Project design flaws have complicated implementation, particularly in the areas of participant training and progress reporting.

Project planning documents did not clearly define program objectives or outputs to be accomplished within a specific timeframe, nor were they expressed in quantitative terms which could be measured. Following are selected project outputs expected at the end of the project as stated in the project paper and repeated in the University of Florida (UF) - AID contract:

- A functioning program to measure smallholder performance and to recommend improvements in cattle production and stall feeding.

- A functioning program for providing foundation seed for maize, groundnuts and beans that meets the certified seed needs of the GOM.
- A functioning potato-seed certification program.
- A functioning horticultural research program at Chitedze emphasizing vegetable production.

We believe these outputs are too vague to objectively determine progress toward their achievement. This lack of output definition is further exacerbated by the fact that the progress reports were not result oriented, and that detailed work plans were lacking. This occurred despite the fact that AAO/Malawi had requested detailed, time-phased work plans more than one year ago. These factors have made AAO/Malawi's monitoring task difficult.

Conclusion, AAO/Malawi Comments, RIG/A/N Response, and Recommendation

The contract statement of work is too broad. To overcome this deficiency, we believe the contractor must provide a work plan which details the steps to be taken to accomplish the broad goals included in the contract. This plan should include research trials, technical assistance (training of counterparts), and ways of disseminating research results; and be integrated with the GOM strategy. In addition to an overall plan, each contract technician should provide a statement of work of what he is going to do to contribute to meeting the overall plan during his or her contract period, and how the counterparts are to be trained.

AAO/Malawi Comments

"The University of Florida has submitted a revised work plan and a Statement of Work for each contract technician. This is currently being reviewed by USAID/Malawi."

RIG/A/N Comments

We have deleted the portion of our recommendation to require preparation of an overall work plan, and statements of work by each technician; but have retained our recommendation that these documents be reviewed and approved.

Recommendation No. 1

AAO/Malawi formally approve the overall work plan of the University of Florida and statements of work by contract technicians when the AAO is satisfied that the plans will accomplish project objectives.

Participant Training Was Not Synchronized To Technical Assistance

The project must be extended in order to meet institution building and participant training objectives, or those objectives will not be met. The project planned that 33 Malawian research officers be trained in the United States; eight to the Ph.D. level and 25 to the M.S. level. Each person was to be trained an average of 27 months to obtain the degree.

Project design did not provide for delays in selecting participants and in completing degree requirements. Many of the trainees needed more time than planned to complete their degrees because of the need to take additional foundation courses. Students are averaging 35 months to obtain degrees rather than the 27 months planned.

Students were sent to the U.S. in phases because the MOA cannot allow all 33 participants to be absent from their work stations at one time.

Conclusion

The scheduling of participant training will not provide maximum benefit to the project because participants will not have an opportunity to interface with the technical assistance team. We believe a better approach would be to delay the provision of technical assistance until the participants started to return so they could work together for the maximum time possible. A Chief of Party might be provided early to get everything set up. This same weakness was found in several recent audits and was addressed to PPC/PDPR in Audit Report No. 3-608-82-27, dated September 20, 1982. In that report we recommended "PPC/PDPR (a) explore methods of building a stronger mechanism into project design to ensure that host governments furnish qualified personnel before technical assistance teams are brought on board, and (b) issue policy guidance to USAIDS for the timely termination or delay of projects whose success depends heavily on the training of personnel, when such personnel are not furnished as planned." The same recommendation is applicable to this finding; therefore, no recommendation is being made in this report.

Extension Capability Is Needed To Disseminate Research Results

A major concern about expending AID money for expanding and improving research is that the GOM lacks the capability to get existing technology to the farmers. New technologies, information on varieties of seeds and the use of insecticides could improve some crop yields by 30 to 40 percent. However, this information is often not available to many Malawian farmers because of a lack of extension capability, and due to lack of inputs because the GOM lacks foreign exchange to purchase seed and insecticides.

The Chief Agricultural Development Officer for the GOM and AAO/Malawi both recognized a need for upgrading extension officers--similar to what this project is doing for research officers. The November-December 1981 internal evaluation cited examples of significant delays by the GOM extension branch in publishing research results. A short term advisor told us that, in his opinion, the primary deterrent to increasing agricultural production in Malawi was that farmers had not been shown how to use existing research results because of a poor extension system.

AAO/Malawi is aware that the GOM extension system clearly lags behind the agricultural research system. This gap will widen as the current research project produces new results. AAO/Malawi indicated it is designing an Agricultural Extension and Training Project which will be funded in FY 1983 to help close this gap. The AAO was also considering the design and implementation of an Agricultural Research Project II. We question the need for a second research project until the deficiencies in the GOM's extension system are corrected.

Conclusion, AAO/Malawi Comments, KIG/A/R Response, and Recommendation

The project does not provide a basis to disseminate research results to the farmers. Research results must be extended to the farmer if research is to provide any benefit to the people and economy of Malawi.

AAO/Malawi Comments

This draft recommendation states that USAID/Malawi should ensure that an extension capability to get research results to farmers is developed before providing additional funding for research. Developing research and extension capability is a long term effort and each is dependent upon the other to provide improved technologies to farmers. The current USAID/Malawi strategy is to develop a three year agricultural research extension and training project

commencing in FY 83. The development of a combined project will help ensure a more effective linkage between research and extension and coordinate these two activities toward the common objective of providing farmers with the necessary information and inputs to increase production and income. This capability cannot be developed quickly and should go hand in hand. Assistance to research should not be stopped until an extension capability is developed, but tied into an extension system through linkages to be explored under the proposed project. The type of research will be influenced by proposed components of the project involving analysis of a substantial amount of socio-economic data available, supplemented by a farming systems research approach. We share the concern of the draft audit to ensure a greater linkage and delivery system for improved technology and believe our combined project approach will meet this objective."

RIG/A/N Response

We agree that research and extension are each dependent on the other, and must mesh to provide farmers with information and inputs to increase production. We also believe that the biggest deterrent to increasing agricultural production in Malawi is a lagging extension system. Consequently, we have retained our recommendation because we believe research inputs should be made cautiously until there are assurances that an adequately funded extension capability can be developed to disseminate research results.

Recommendation No. 2

AAO/Malawi ensure that an extension capability to get research results to farmers is developed before funding additional research projects.

University Contract Team Selection Needs To Be Improved

The UF Contract Team Was Not Adequately Prepared to Implement the Project

The University of Florida team was not adequately prepared to implement the project, resulting in delayed implementation. When the Chief of Party (COP) arrived in Malawi, he required daily meetings with AAO/Malawi management to get answers about basic AID regulations.

The COP:

- Did not have a copy of the AID-UF Contract.
- Did not know the contract team was entitled to pouch privileges.
- Attempted to purchase project goods from South Africa.
- Did not know that commodity receiving and expenditure reports were required.
- Did not know procurement and accounting requirements.

These self-generated problems, and the resulting question and answer sessions, detracted from implementation and were caused by inadequate contractor orientation in the United States before coming to Malawi. A contributing factor was the newness of the Office of the AID Representative in Malawi. The UF subsequently recognized that its contract orientation procedures were inadequate, and has implemented regular contract administration sessions for home office and field personnel.

UF Proposed And AAO/Malawi Accepted Unqualified Contract Candidates

Individuals were accepted for project employment (by both AAO/Malawi and the GOM) who did not meet the qualifications set forth in the project paper. For example, the project paper called for an agronomist with a "Ph.D in Agronomy and a minimum of seven years research experience in crop production...." The person contracted had a Ph.D, but no experience in crop production. Instead, his experience was in pasture agronomy.

We found that the lack of a crop agronomist had adversely affected research results in other components. Research results are not useful unless they are coupled with production impacts. Project officials believe a crop agronomist is needed, and plan to replace the present contract employee (when his contract expires in November 1982) with a crop agronomist.

In a second case the project paper called for a horticulturist with a Ph.D in Horticulturist Science and a minimum of seven years research experience in vegetable or fruit production in a tropical or sub-tropical region. The person who was employed had just received his Ph.D. degree in May 1981. His experience consisted of four years as a research assistant in Michigan. This contract employee was subsequently terminated because he did not work effectively with GOM officials.

In a third case the project paper called for a farming systems analyst with a Ph.D in sociology or anthropology with substantial knowledge of agricultural production and experience with agricultural change in Africa. The person contracted had previously spent approximately two years in Africa doing anthropological research on immigrants and refugees. This experience does not satisfy the requirements for substantial knowledge of agricultural production and experience with agricultural change in Africa.

Recent audits of other projects also disclosed instances where the failure to field a qualified contract team on time caused implementation delays. A project in Sudan got off to a slow start because the contractor nominated people who did not have the qualifications outlined in its proposal. Several of these people were rejected, which resulted in delays while the contractor searched for alternate candidates. In Morocco, project implementation problems were attributed to inadequate staff furnished by the contractor.

The General Accounting Office in an October 1981 report, stated that inadequate university capability and commitment are exemplified by extensive use of outside hires, poor home institution back-stopping, and under-qualified staffs.

The project's internal evaluation stated that "conclusions are being reached that BIFAD has accomplished little but add another layer of bureaucracy for project approval and implementation and that the Title XII Collaborative Assistance Mode has little real meaning."

The GOM was not consulted when the contractual agreement was made, and neither AAO/Malawi nor the GOM received a copy of the UF contract until six months after it had been signed by M/SER/CM. The failure to consult with the GOM resulted in an inconsistency between the contract and GOM policy. The contract stated that the cooperating country would supply utilities. Since the GOM was not a party to the contract and as this was against its policy, the GOM refused to provide utilities.

Conclusion, AAO/Malawi Comments, RIG/A/N Response,
and Recommendation

The UF did not initially field a contract team that satisfied project requirements; and adequate orientation was not provided to the contract team, until recently, to assure it had sufficient knowledge of AID regulations to operate effectively and efficiently. In addition UF did not provide team members that met project requirements. How can a University be selected if they don't have available staff to meet project requirements?

We believe the process of recommending Title XII Universities as contractors needs to be reviewed. In this case it was apparent the UF was not prepared to field an adequate team.

AAO/Malawi Comments

AAO/Malawi's response to our draft report stated that the UF had attempted to secure the best possible candidates, and pointed out that generally the technical advisors were performing well. They also

cautioned against making firm judgments regarding technical consultants by comparing original job descriptions with resumes.

RIG/A/N Response

The point of this finding is not to question the performance of individual technical consultants. Instead, our point is that the UF nominated candidates who, in our opinion, did not fulfill the requirements set out in the project design; and that these candidates were accepted by both AAO/Malawi and the COM. Also, we have found instances in other audits where the contract teams did not meet the project's requirements. Consequently, we have retained our recommendation because too frequently project implementation is being delayed and AID funds are being wasted because teams are fielded that don't meet project needs.

Recommendation No. 3

PPC/E (a) evaluate the process of contractor and contractor team selection to determine what can be done to improve selection and the assignment of qualified Title XII university teams, and (b) disseminate the results of the evaluation to BIFAD and AID's Regional Bureaus.

The Contractor Did Not Respond to AAO/Malawi Requests for Information

The UF contract team was not responsive to AAO/Malawi requests for information.

We found that as of August 1982, the latest commodity receiving and inspection report prepared by the contractor was dated December 1980. The value of project site commodities as documented by receiving reports was \$25,000. However, expenditures for expendable and non-expendable property under the UF contract as of June 1982 totalled \$120,900. Therefore, the contractor had not properly reported commodities valued at \$95,900. AAO/Malawi had discussed this deficiency with the contractor prior to our audit. During our visit the contractor finally prepared the missing 21 months of receiving and inspection reports.

An internal AAO/Malawi evaluation conducted in November-December 1981 recommended that the COP improve the quarterly and monthly reports by clearly and concisely reporting what had been accomplished--not just the type of work performed. We found, however, that this recommendation had not been followed--contractor reports continued to be activity rather than result oriented.

Although the technical assistance team was working on research activities as defined in project documentation, it was impossible to determine from contractor progress reports how these activities would result in the accomplishment of project objectives. Therefore, AAO/Malawi did not have necessary monitoring information which was especially important because AAO/Malawi did not have an agricultural officer on its staff.

The internal evaluation also stated that contractor work plans were not sufficiently detailed, and recommended that "complete work plans be prepared immediately by all Florida team members."

In a May 1981 review of the contractor's work plan, the AAO/Malawi Representative suggested that the work plan be revised as follows:

- The plan should be futuristic and cast in a time frame--what planned actions are envisioned and when.
- The plan should include the major components of the agricultural research project with an indication of how the University of Florida's activities will contribute to the achievement of the planned outputs listed in the project paper and in the University of Florida-AID contract.

As of August 1982, 28 months after the University of Florida-AID Contract was signed, such a plan had not been submitted to AAO/Malawi by the contractor. Reasons why the contractor had not responded in an acceptable manner to AAO/Malawi's requests for information included:

- There was a delay in fielding the project team. Four team members arrived in Malawi in the fall of 1981--approximately 16 months after the arrival of the COP.
- Project administration required an inordinate amount of the COP's time because the GOM delayed the provision of administrative personnel to the project for 18 months.

Although these are valid reasons why the preparation of a detailed work plan was delayed, we believe such a plan is overdue. As noted previously in this report, a detailed work plan is critical for this project because, in our opinion, project objectives are vague and the determination of their accomplishment will be difficult.

Conclusion and Recommendation

The UF Contract team had not been responsive to AAO/Malawi requests for information. AAO/Malawi had clearly requested (a) current commodity receiving reports, (b) improved contractor progress reports, and (c) detailed, time-phased work plans. Because these requests have been outstanding for approximately one year, we are making the following recommendation.

Recommendation No. 4

AID's Office of Contract Management (M/SER/CM), in conjunction with AAO/Malawi, ensure that the University of Florida is aware of its contractual obligations to satisfactorily respond to AAO/Malawi requests for information in a timely manner.

Benefits From Short Term Technical Assistance Is Questionable

Eight short term consultants visited Malawi in connection with the Agricultural Research Project in 1981; visits by eighteen short term technical assistance personnel were planned for 1982. It was difficult to determine the benefit and need for many of these consultants brought to the project site. None of these short term consultants submitted a report to AAO/Malawi at the conclusion of their assignment.

For example, a short term consultant was recently sent to Malawi to develop a course on statistics for Malawian technical assistants. We question the benefit of this kind of short term assistance considering that returning participants will have acquired skills in statistics which they can pass on to their subordinates. There were other short term visits with vague and questionable benefits. The stated purposes of some of the questionable visits were:

- Orientation on the project.
- Develop appropriate procedures for handling Malawi Agricultural Research Project.
- Develop plans and purchases for in vitro Animal Nutrition Laboratory.
- Assist in the peanut breeding program.

Conversely, there was one activity performed by long term technicians that could have been done by short term consultants. The COP and the Livestock Research Officer were heavily involved in the time consuming task of doing the programming for the computers used for administrative support and research data analysis, and training Malawians to use those programs. We consider this a waste of project resources because a long term technician costs about \$1,400 more a month than a short term technician. More importantly, we believe that researchers doing computer programming is a waste of technical research skills.

AAO/Malawi was concerned about the number of short term consultants and their need. To improve control, AAO/Malawi required each technician to be justified. We believe an additional step is required. Each technician should be fully justified prior to their arrival, and subsequently required to provide a report to AAO/Malawi on what he accomplished during his short term contract.

Further, we believe there is an opportunity to better use short term consulting skills, particularly if an Agricultural Research II project is planned and implemented.

Conclusion, UF Comments, RIG/A/N Response, and Recommendation

Short term technicians were not providing a report to AAO/Malawi on what was done or accomplished, and how it contributed to the overall goals of the project. The project should make more effective use of these technicians. It did not appear that all the short term consultants provided by UF were necessary.

UF Comments

UF indicated that the technicians are required to prepare reports, and that reports are available at UF for short term technicians.

RIG/A/N Response

We did not see these reports in AAO/Malawi files, and at the time of our review AAO personnel were not aware they existed. We therefore have retained our recommendation.

Recommendation No. 5

AAO/Malawi require (a) full justification of the need for short term technicians prior to approving the trip, and (b) reports from short term technicians on what was accomplished and how it benefits the project.

Opportunity To Reduce Cost Of Follow On Research Projects

AID personnel we have talked to indicate that research is a long term effort and cannot be accomplished within the life of a five year or less project. We agree with this view; however, we believe follow on projects should usually be structured differently than the original project. For example, on this project approximately 20 Ph.D. and M.S. degree Malawians should have returned to do agricultural research work in Malawi by the project's completion date. These trained personnel should be able to operate an

agricultural research program under the direction of a Chief of Party without requiring the support of the same full time staff of long term contract technicians provided under the original project.

If the technical assistance team were brought on board later so they would interface more with the trained participants, the project would have developed a much better base (discussed on page 7 of this report).

However, since the interface will be shorter, and for some participants there will be no interface, a follow on project may be required. We believe that follow on projects should be scaled down to utilize the training of the returned participants to the maximum extent possible, rather than to continue to field a large expensive team of contract technicians. A chief of party to direct and coordinate short term technical assistance appears to be an effective and less costly way for AID to continue to support research activities.

Conclusion, AAO/Malawi Comments, RIG/A/T Response, and Recommendation

We believe AAO/Malawi should make follow on research support as cost effective as possible by utilizing returned participants and short term technical assistance.

AAO/Malawi Comments

"This recommendation states that USAID/Malawi, in the design of any second agricultural research project, consider the feasibility of staffing the project with only a Chief of Party supported by short term technicians. While we are only in the early stages of exploring the combined research/extension project noted above, it is our impression that long term technical assistance will be required for some period of time. While the Malawian participants will return to take up key roles, some reasonable period of overlap will be required to realize the full benefits of training. As the audit report notes, there are no counterparts as such and this was stated to be a defect. While the counterpart requirement was not called for as such, we agree with its desirability. At a minimum, that overlap can only take place where there is some continued long-term TA after the return of the participants. Further, depending on the design of the new project, there are likely to be other forms or directions of research that will require long term TA and indeed more training. It is not likely that all these areas can be covered by newly returned

participants now in training. The Agricultural Research and Extension PP will explore all these issues and provide full justification for whatever is recommended for on-going technical assistance."

RIG/A/N Response

We believe that it is reasonable to expect a person with a Ph.D. to be able to work independently, or with short term technical support at some point in time. Therefore, we have retained our recommendation concerning the staffing of any future agricultural research project.

Recommendation No. 6

AAO/Malawi, in the design of follow on agricultural research projects, consider the feasibility of staffing the project with a Chief of Party, supported only by returned participants and possibly short term U.S. technicians.

Control Over The Use Of Advances Was Lacking

The University of Florida had not established internal control safeguards over the use of advances of funds from the local project account for travel and training expenses.

As of June 30, 1982, the project had advanced approximately \$26,000 to individuals to cover travel and training costs. An accounting of these funds did not exist. The project accountant did not maintain records to document the amount advanced to individuals, the amount of reimbursement, or the outstanding advance.

Conclusion, UF Comments, and Recommendation

Better control over project travel and travel advances must be instituted by the UF. In response to our draft report, UF indicated the advances have been accounted for and new control procedures instituted. We have retained our recommendation pending verification that AAO/Malawi is satisfied with the action taken.

Recommendation No. 7

AAO/Malawi direct the University of Florida COP to develop an accounting system to control the use of travel and training advances, and to account for funds already advanced.

Progress Had Been Made, But The Project Was Significantly Behind Schedule

Although the project was significantly behind schedule, progress had been made toward achieving planned outputs. As of June 30, 1982, 55 percent of the project time had elapsed, but only 32 percent of the planned technical assistance had been provided and only 22 percent of project funds had been expended. The project was behind schedule because of delays in signing the UF-AID contract and delays in fielding the contract team.

Despite these delays we found that progress had been made. For example, new programs were established in farming systems (a data gathering and analysis approach to discover new techniques for increasing farmer output) and agricultural economics; pasture experiments were established; an improved livestock research program had begun; and the maize situation was assessed and a plan for a maize breeding program established.

There were other project components in which little or no progress had been made:

- No progress had been made to establish a horticultural research program.
- The development of a research/extension liaison system was moving slowly.

Conclusion and Recommendation

Since five of the seven technical advisors had been in Malawi for less than one year we believe that progress to-date, under the circumstances, was adequate but falls short of planned goals. Little, or no, progress had been made in establishing a horticulture program or a research/extension liaison system.

Recommendation No. 8

AAO/Malawi ensure that the UF promptly develops a plan to implement the horticulture research program and the research/extension liaison system as was intended by the project design.

A Host Country Contractor Was Not In Compliance With AID Nationality Regulations

On February 15, 1982, the GOM entered into a contract with A.S.R. Multiconstruction (ASR) Inc. in the amount of Kwacha 1,119,870 (\$1,008,892) for certain construction at the Chitedze Agricultural Research Station.

During the pre-contract period there was concern and discussion within AID offices as to whether ASR would comply with AID nationality regulations. However, after review, AID found ASR to be an eligible bidder in accordance with AID requirements.

In April 1982, AAO/Malawi became concerned about ASR's compliance with the terms and conditions of the award and contract. As a result, the AAO called for an investigation, and informed the GOM that AID would not continue to finance the contract unless the matter was resolved within 30 days.

The investigation, conducted primarily by the GOM, REDSO/EA, RFMC and an AID regional legal advisor, found that ASR was in breach of the nationality, source and cargo preference clause of the contract. Specifically:

- ASR used personnel from Roberts Construction, an ineligible supplier.
- Procurement activities were conducted by and in the name of Roberts Construction.
- Ineligible equipment was leased from Roberts Construction.

At the conclusion of the investigation, ASR was allowed a time period to rectify and comply with the terms of the contract.

Total contract costs were determined by ASR and certified by the audit firm of Deloitte, Haskins and Sells. These costs were analyzed by the GOM and a decision was made as to which costs were eligible or ineligible. It was determined that Kwacha 19,715 (\$18,070) was ineligible, and the contract price was to be amended downward in that amount.

We reviewed the cost sheets, a sampling of cost documentation and the criteria used to determine eligible or ineligible costs; and, in our opinion, the method used to adjust the contract for ineligible costs was reasonable. The amount we determined to be ineligible was not exactly in agreement with the GOM amount; however, the difference was not significant. Consequently, we make no recommendation concerning the proposed amount of the adjustment.

However, we noted that the contract amendment decreasing the value of the contract by the re-adjusted amount had not been accepted in writing by ASR.

Recommendation No. 9

AAO/Malawi ensure that the GOM secures ASR's written approval of the contract amendment before reimbursing any additional costs under the ASR contract.

LIST OF REPORT RECOMMENDATIONS

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<u>Recommendation No. 1</u>	7
AAO/Malawi formally approve the overall work plan of the University of Florida and statements of work by contract technicians when the AAO is satisfied that the plans will accomplish project objectives.	
<u>Recommendation No. 2</u>	9
AAO/Malawi ensure that an extension capability to get research results to farmers is developed before funding additional research projects.	
<u>Recommendation No. 3</u>	12
PPC/E (a) evaluate the process of contractor and contractor team selection to determine what can be done to improve selection and the assignment of qualified Title XII university teams, and (b) disseminate the results of the evaluation to BIFAD and AID's Regional Bureaus.	
<u>Recommendation No. 4</u>	14
AID's Office of Contract Management (M/SER/CM), in conjunction with AAO/Malawi, ensure that the University of Florida is aware of its contractual obligations to satisfactorily respond to AAO/Malawi requests for information in a timely manner.	
<u>Recommendation No. 5</u>	15
AAO/Malawi require (a) full justification of the need for short term technicians prior to approving the trip, and (b) reports from short term technicians on what was accomplished and how it benefits the project.	

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<u>Recommendation No. 6</u>	17
AAO/Malawi, in the design of follow on agricultural research projects, consider the feasibility of staffing the project with a Chief of Party, supported only by returned participants and possibly short term U.S. technicians.	
<u>Recommendation No. 7</u>	17
AAO/Malawi direct the University of Florida COP to develop an accounting system to control the use of travel and training advances, and to account for funds already advanced.	
<u>Recommendation No. 8</u>	18
AAO/Malawi ensure that the UF promptly develops a plan to implement the horticulture research program and the research/extension liaison system as was intended by the project design.	
<u>Recommendation No. 9</u>	19
AAO/Malawi ensure that the GOM secures ASR's written approval of the contract amendment before reimbursing any additional costs under the ASR contract.	

Appendix B

List of Report Recipients

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