



PD-AAL-420

2630041/53

UNITED STATES AGENCY for INTERNATIONAL DEVELOPMENT

ISN 13207

EVALUATION REPORT

AGRICULTURAL DEVELOPMENT SYSTEMS PROJECT

OFFICE OF SECTOR ANALYSIS & EVALUATION

JANUARY 1981

EGYPT: THE AGRICULTURAL DEVELOPMENT SYSTEMS PROJECT
an INTERIM EVALUATION

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January 1981

The views and interpretations expressed in this report are those of the authors and should not be attributed to the Agency for International Development.

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SUMMARY

The Agricultural Development Systems Project (ADS), funded by a grant from AID of \$ 14 million dollars in 1977 has as its goal "increased agricultural productivity and the total contribution of the agricultural sector of Egypt" (Project Paper, May 1977). This goal was to be achieved by September, 1983. A wide range of activities was included in the original project paper as appropriate for ADS consideration. These included research, training, feasibility studies, institutional development, policy advice and implementation of selected development activities in agriculture. Singled out for special consideration were horticulture development, agricultural economics and extension.

The institutional mechanism for implementing the Project was a host country contract between the Arab Republic of Egypt's Ministry of Agriculture (MOA) and the University of California with the Davis Campus as the lead institution (UC/Davis). This contract was signed January 1979, although interim funding arrangements were made to involve UC/Davis in project development beginning in 1976. A Joint Policy Planning Board was established in 1978. The JPPB consisting of high level scientists and public officials was to provide policy guidance, establish priorities and approve major categories of activity such as horticulture. It was made up of 5 Americans and 10 Egyptians. Administration of the Project was to be carried out by a Co-Directorate, backstopped by a UC/Davis coordinator and an Egyptian coordinator in the MOA. Technical Advisory

Committees were established for major subactivities, with full time associate co-directors from both countries. Each activity was to be done collaboratively with American and Egyptian scientists heading up activity teams, although the bulk of the research would be done by Egyptians. It was expected that these collaborative arrangements would produce immediate results in terms of new knowledge as well as being beneficial in upgrading the skills of Egyptian scientists. To facilitate work in horticulture, the Project proposed establishing and equipping a Central Laboratory at Cairo University.

When this evaluation was done in December 1980 and January 1981 it was found that the Project had lagged seriously behind schedule, both in concluding the host-country contract and in implementation. Although the Project Paper was approved in 1977 and an agreement between AID and the ARE reached in the same year, it was not until January 1979 that a host-country contract was signed between MOA (ARE) and UC/Davis. Implementation lagged during 1979 as administrative and personnel problems continued to plague the Project. The one area to show early progress was the Horticultural Subproject. The Agricultural Economics Subproject was slow in implementation due to difficulties in finding American collaborators. The extension project failed to make any headway due to an inadequate feasibility study and disagreement over composition

of an appropriate second team between UC/Davis and MOA. Other activities contemplated in the original design were abandoned or spun off from the Project as feasibility studies. By December of 1980, it appeared that the Project was going to be a failure.

In mid 1980, however, major reorganization of the Project had taken place on all sides--and considerable momentum developed. By mid January 1981 29 activity agreements have been signed, and progress toward establishing a Central Laboratory for Horticulture has been made. Over seven million dollars of the original grant has been obligated, with over three million expended. Several useful feasibility studies are completed, including one on Agricultural Statistics and Policy which has become the basis of a new USAID project.

The team concludes that the Project as originally conceived will not and cannot be expected to achieve all the purposes and goals for which it was originally established. An inappropriate institution was asked to do an unrealistic task. Nevertheless, the current level of effort is within the terms of the original design--and now shows signs of producing positive, if more limited results, some of which may be expected by September 1983 when the present contract concludes.

We recommend therefore that a major revision of the project paper be undertaken to bring expectations closer to the realities of what can be accomplished. Such revision

should include preparation of a coherent strategy and clear objectives for research, training and institutional development. Upon successful conclusion of this task, we recommend consideration of a two-year extension of the Project.

We believe there are important lessons to be learned from this experience. If AID is to "wholesale" the development process, it must be prepared to develop realistic project purposes and goals, exercise great care in the selection of contracting entities, and invest more effort in substantive implementation. Procedural oversight is a poor way to assure project progress. If American universities are to conduct international development activities, they must develop institutional mechanisms and incentives which support these efforts. Universities should carefully assess both their administrative and academic research interests and capabilities before entering into such commitments. Finally, the developing nation which enters into such relationships should develop clear and consistent objectives and mechanisms to insure that it gets what it wants. It should also become increasingly conscious of the long term sustainability requirements of activities begun through foreign aid projects.

INTRODUCTION

This evaluation was proposed by USAID/Cairo as an interim evaluation of one of the earliest projects to be developed in the USAID agricultural program in Egypt. The Project is not large by USAID/Cairo standards, but its importance transcends the Project itself for several reasons. First, it is part of AID's largest agricultural program, in a country receiving more foreign assistance from the United States than, for example, the combined development assistance program for Africa. Second, it is a host-country contract between the Arab Republic of Egypt and the University of California, and therefore represents something of a departure from the normal AID contract procedure. Third, the Project comes under the umbrella of Title XII of the Foreign Assistance Act, which established an important new role for American Land Grant Universities in foreign assistance, even though the project origins antedated Title XII. Last, the lessons to be learned from this Project may be important for AID generally, as it faces the uncertainties of development assistance in the 1980s.

Because the Project was not very far along when we began our evaluation, we were unable to examine much in the way of results beyond the "input" stage. In our preliminary discussions with AID officers in Washington we noted strong feelings of frustration and despair about the Project. A few people had been working on it since 1975--and had concluded by 1980 that the Project was a failure. We therefore, surmised

that our task involved more than a review and assessment of accomplishments, or the lack of them. For the evaluation to be useful, we had to come to grips with the history of the development of the Project--and analyze why the Project appeared to be in such difficulty. In doing this we saw our job as one of explanation and understanding--rather than simply describing. We certainly did not want to be cast in the position of finding out "who was to blame." To our surprise we found that the Project has the potential to produce useful contributions to Egyptian agriculture, especially in horticulture and agricultural economics research, even if the Project as implemented is not what was in the minds of the original designers.

The findings and judgements contained in this report are the result of a team effort. However, we could not have begun this task without the assistance and support of a large number of people, both in the United States and Egypt.

In addition to those people interviewed, we would especially like to thank Emily Baldwin of the Near East Bureau Evaluation Office for high efficiency and good humour while helping us with contracts and travel arrangements prior to our departure; Richard Rhoda, Near East Office of Evaluation for permitting Ms. Baldwin to assist us, and Ms. Peggy Colbert, PFC/E/S for additional secretarial support.

In Egypt, the encouragement and advice of Messrs. John Blackton, Ray Fort, Bill Steckel, and George Armstrong of USAID/Cairo made our efforts both possible and efficient. They demanded an honest and professional job. If we failed,

the fault is ours alone. We would also like to recognize the invaluable administrative assistance provided by Ms. Nelly Riad and Mohamed Ayoub of the USAID Mission who demonstrated once again the value of foreign national employees to the work of AID.

We would also like to thank the project staff at UC/Davis and in Cairo for making their files available to us and for giving us their opinions and judgements about the Project. If we have differed with them in this report, it is not because of a lack of good will or a genuine effort on their part to help us in our search for information.

Among the many Egyptians who went out of their way to assist us, we give special thanks to Dr. Youssef Wally of the Ministry of Agriculture and Dr. Azzouni, Co-Director for Horticulture, ADS. Both gentlemen went to considerable trouble to make our work possible, and to assist us in broadening and deepening our understanding of this Project. For their hospitality and graciousness we owe a considerable debt of gratitude.

Finally, we offer our thanks, appreciation and some considerable awe to the talent and skill of Ms. Genny Allison who typed the final drafts.

To all of these, and many we cannot name, we owe our thanks. We are conscious of the many gaps in our knowledge and there may be significant errors and omissions in our report. These are, of course, the responsibility of the team.

In some ways, this evaluation has become a case study of the history of a foreign assistance project. Inevitably mistakes were made, judgements valid in one period became invalid as circumstances changed and the difficulties of meshing the interests and procedures of three different entities lead to strain and frustration. It has been said that all development projects are experiments in social change. We firmly believe that such experiments must be studied for the lessons they may hold for the future. We hope this report will be seen as one small contribution to our understanding of the complex process in which we, Americans and Egyptians, are engaged.

PROJECT DATA SHEET

Project Title: Agricultural Development Systems - Egypt

A.I.D. Project Number: 263-0041

A.I.D. Loan Number: Grant

Grant Recipient: Ministry of Agriculture, Arab Republic of Egypt

Grant Amount:

1. Dollar account: U.S. \$ 9,225,944
2. Egyptian pound account: L.E. 3,971,950
3. Ministry of Agriculture pound account: L.E. 3,300,000

Total dollar equivalent of accounts 1 and 2
only = \$ 14,866,113

Terminal Date for Request for Reimbursement and

for Disbursement: September 30, 1983

Purpose: Improve the delivery of agricultural development services to small farmers by systematically strengthening the planning, implementation and management of public sector agricultural institutions.

Accomplishments: (to January 27, 1981)

Implementation of 12 collaborative research activities in the area of horticulture, 15 in the area of economics, and 4 miscellaneous research activities. Partial implementation of the equipping of a horticultural research laboratory.

I. BACKGROUND

A. Project Design - Purposes and Goals

The Agricultural Development Systems Project Paper stated as a principal objective the creation of an institution which, through a wide variety of activities, would address fundamental problems of Egyptian agriculture. Based on two reports completed in 1976 by the U.S. Department of Agriculture and the World Bank the main problem in Egyptian agriculture was identified as organizational fragmentation and disarray. Many directorates, departments and other agencies competed for scarce resources, making it difficult to develop coherent planning. Resources were inefficiently allocated and sound development projects were not forthcoming. Departments in the Ministry of Agriculture were abundantly staffed, but personnel needed additional training to be effective, particularly at the middle level ranks. Physical infrastructure was inadequate, with many field research stations lacking even minimal equipment. Because of the emphasis in Egyptian policy on industrialization during the 1960s, agriculture had been neglected except for cotton. Research and extension in horticulture was in especially bad shape. A cadre of trained scientists did exist, but found it difficult to carry out activities due to lack of budget. Extension was dominated by concern for cotton, and served more as a regulatory agency than as an

extension service. Further it was poorly integrated into the research side so that transfer of new technologies to farmers was difficult to achieve.

On the policy side, efforts to rationalize Egyptian price policy were foremost in the view of outside observers. Most agreed that the system of administratively determined prices and quotas was cumbersome and resulted in inefficient combinations of factors of production in the agricultural sector. Although the move toward liberalization was nascent in 1975, clearly something needed to be done to reduce the level of indirect taxation of the rural sector and to provide both better price signaling as well as better incentives to farmers to increase production. These and other recommendations reflected, of course, a fundamental difference in the intellectual and ideological framework of western and western-trained economists from the "command economy" view which had dominated Egyptian economic and political thinking through the 1960s and early 70s.

In sum, movement toward restructuring of the Egyptian economy was being called for, as well as a major shift in the political posture of Egypt in the Middle East. This affected the role of agriculture as the main source of livelihood for most Egyptians. One of the principal functions of foreign assistance, especially the USAID as the principal donor, was to assist in the difficult transition which was envisioned.* It was in this setting that the USAID

* USAID refers to United States Agency for International Development Mission in Cairo, Egypt.

mission sought to establish an entity to assume responsibility for a share in this restructuring process, including both policy and institutional reform.

The instrument proposed for this was the Agricultural Development Systems (ADS) project. A collaborative program was to be established between the Ministry of Agriculture and the University of California, with the Davis campus as the lead institution. A high level Joint Policy and Planning Board was to be created, originally to meet four times a year, which would oversee and administer a comprehensive program of activities involving the MOA and other agencies in the reform of Egyptian agriculture. Its broad functions were:

- to identify and advise the government on matters of current and future policy,
- to analyze and identify constraints to increasing agricultural productivity,
- to determine priority needs in agriculture and
- to develop and administer research, training and extension activities in the agricultural sector.

In addition, the USAID mission, faced with the problem of limited staff and expanding financial resources expected the ADS to serve as the "primary planning and advisory body for USAID supported projects in Egypt and the Agricultural Sector" (Project Paper, 1977).

This broad and comprehensive set of functions was translated into an AID project with the concomitant set of goals, purposes, outputs and inputs. By September 1983, the end of the Project, the Project was expected to achieve

the goal of "increased agricultural productivity and the total contribution of the agricultural sector of Egypt."* This goal was to be verified by standard indices of physical product, farm income, labor and other farm inputs used, the value of food production per capita and improved nutritional value of food consumed.

The purpose of the project was to create within the MOA and related agencies "an improved capacity for planning developmental programs and for delivery of services which will enable farmers to increase incomes profitably."* (italics in original). By the end of the Project an institution would be in place allocating resources based on a comprehensive analysis of problems, costs and benefits. Levels of services would be increased along with farm profits in the individual commodity areas addressed by the project.

Five specific outputs were identified, including:

1. a comprehensive set of developmental activities in one or more commodity areas,
2. an agricultural economics organization capable of continued and comprehensive analysis and planning of action programs,
3. a critical mass of trained scientists, organized and equipped to participate in problem solving,
4. joint research on critical agricultural sector problems,
5. procedures established to bring U.S. agricultural technology to bear on agricultural sector problems.

The work of the JPPB was to be organized into "activities,"** each with joint Egyptian and American administrative and technical staff. It decided early on that three major areas

* Quotations from the Project Paper, May, 1977.

**The term "activity" in this Project denotes a formal agreement to conduct research or some other function.

of concentration would be horticulture, ag-economics, and rural development. Cutting across all activities were five major categories of effort. These included: 1) major sub-projects such as horticulture requiring long term effort by technical assistance and equipment; 2) joint research activities similar to a small grants program; 3) short term technology transfer focused on immediate problem solving; 4) feasibility studies leading to projects which could be implemented by ADS or funded separately and 5) general training to include training needs not met by other project activities.

The project emphasized "collaborative relationship between the Egyptian officials and experts at all levels of decision-making and implementation." Legal backing was given to this concept through a host country contract between the government and the University of California--with AID's role primarily that of a contract monitor.

Analysis of the Design of ADS

From the vantage point of 1981, there appears to be a number of fundamental problems with the ADS concept. First and foremost is the questionable wisdom of expecting any major institutional change involving nearly the entire agricultural sector to be implemented by one AID-funded project. The expectations for this project were too broad, the time frame too short, and its success depended on external factors not possibly within the control of the JPPB. Second, it is unlikely that any "high level" commission or policy board could be established as a superstructure responsible for bringing order

and coherence to Egyptian agriculture without assigning such a board enormous power and resources, neither of which were available. Third, even if such power could be focused in one body it is unlikely that an American University would be willing to get involved in such a task, or would have the essential political clout to be effective. Indeed it is most unlikely that Egyptian leaders would be willing to open the door to this level of policy influence, even if Americans were prepared to play such a role. Fourth, the effective withdrawal of the USAID from the process meant that USAID would have very little influence over decisions regarding priorities, projects, etc., leading almost inevitably to lack of communication and frustration on all sides. Finally, the effort to squeeze a broad program of policy and institutional reform into the project format strained that format to the point of breaking--resulting in a logical framework which borders on the incredulous. The project format also brought to bear all the procedural and regulatory mechanisms which make AID projects tedious to implement, contradictory to the principal of "wholesaling" the functions of the USAID agricultural office to a collaborative agreement. The result was that most of the communication between USAID and the project was over matters of waivers, vouchers, payment schedules and the like--with little evidence of a substantive dialogue having occurred after the initial contracts were made.

B. History and Analysis of Project Development

The gestation period for this Project was unusually lengthy. It took from 1976 when UC/Davis first became involved until the host-country contract was signed in 1979. Activities did not begin in earnest until mid 1979, and it has only been in the last three months that real momentum has developed. It is important, therefore, to examine the history of this Project in some detail in order to understand its difficulties.

The idea for ADS--a joint long term relationship between an American Land Grant University and the Arab Republic of Egypt (ARE)--was formulated in the aftermath of the reestablishment of a U.S. relationship with Egypt in late 1973. At that time a joint commission was created at the high ministerial level to oversee and work out U.S. economic, political and military assistance to Egypt. This model of high level collaboration clearly influenced the thinking behind the ADS Project in its initial stages. The basic questions had already been addressed in the USDA-Ministry of Agriculture (MOA) report--published in 1976 but drafted much earlier--"Basic Constraints to the Development of Egyptian Agriculture."* It was a broad overview and could have served as an agenda for the ADS Project. Indeed, USDA had some interest in serving as the U.S. institutional partner in ADS, but was ruled out, apparently by the preference of the Mission and MOA, in favor of a U.S. educational institution.

* Contract AID/NE-C-1269 for \$ 418,416, 10/1/76.

Underlying some of the early, high level U.S.-Egyptian contracts was the distant hope that Egypt and Israel might enter into a stable peace. If that were to transpire, then technical and economic cooperation between the two countries could be promoted through projects like ADS. Israel, after all, had demonstrated its skills in arid-lands horticulture and exports, and many Israeli agronomists had, like their Egyptian counterparts, benefitted from training in the California system. However, it was not until after the Camp David accords in March 1979, a few months after the signing of the final ADS contract, that this earlier vague hope could be given any substance.

Several other background factors influenced the original design of this project. These include; the emergence of the Findley-Humphrey amendment enlarging the role of U.S. universities in U.S. foreign assisted agricultural development programs, the small size of the USAID mission, and the growing but still relatively small size of the U.S. foreign aid program in Egypt. Also, it could be argued that the Foreign Assistance Acts of 1973 and 1975 influenced the rhetoric of the original design, although the evidence for direct linkages between the outputs of this project and benefits to small farmers is somewhat tenuous. Finally the fact that the Egyptian program was a supporting assistance program, motivated by legitimate foreign policy concerns which established in advance the dollar size of the foreign aid program had an influence on all specific projects. It is important to understand these background influences in order to grasp why

this project was so broadly conceived--and why in 1979, when the host-country contract was finally signed, the Project assumptions seemed to have been undermined by a very different context.

The Findley-Humphrey Amendment passed into law as Title XII in 1977. The Airgram explaining the amendment said that American Land Grant universities would play a significant role in U.S. foreign assistance. Supporting assistance countries were not bound by Title XII, but the Near East Bureau and USAID/Cairo were pleased to observe that the proposed relationship between the University of California and the MOA was well within the spirit of Title XII. In fact, the contract would be among the earliest, if not the very first such agreement to be signed. Clearly the congruence of Title XII with the concept of a UC/D-ARE contract gave an added cachet of legitimacy to the proposal. It may have been important in adding to the degree of support for and interest already expressed in the proposal by the then Assistant Administrator for NE, Mr. Robert Nooter.

Consistent with Title XII and fundamental to the USAID approach at the time was the idea of collaboration between the U.S. university and the host government. AID's role was that of broker in the design stage, and monitor and evaluator during the implementation period. It was not a contract between AID and the University in the normal sense of the word. The negotiators for UC/Davis apparently did not understand this--and certainly would have preferred a

bilateral technical assistance contract with the Mission. In fact, they continued to argue for a direct contract through 1978.

The USAID posture was that of low profile. The job was to get the Ministry of Agriculture together with a top flight U.S. institution under an umbrella type agreement to provide policy, research, design and implementation advice and direct action to the agriculture sector in Egypt. Once the agreement had been reached, the USAID expected a number of good things to happen; fast.

Two other factors influenced the original design concept, the size of USAID staff and the desire to conform the Egypt program to the new thrust of the Foreign Assistance Act of 1973 and 1975. As was mentioned earlier, when discussion began about this project in '74 - '75, the USAID agricultural office consisted of one person who was faced with the problem of developing a large program. At that time, there was considerable reluctance on behalf of the U.S. Ambassador to allow the mission in Cairo to expand. Although as a supporting assistance country the AID program in Egypt had greater leeway to provide program assistance to Egypt than would be true of a development assistance account country, there was still pressure to have the mission conform to principles and objectives of the Foreign Assistance Act, particularly after 1975. These include developing a project portfolio which would

produce benefits for the small farmer. Since horticultural crops were largely grown by small farmers in Egypt--research to improve the productivity of such crops would presumably benefit the small farmer--ag-economic research which indicated that farmers were responsive to better prices could be justified in the same manner.

The ADS project seemed to be a good solution to the multiple constraints and pressures facing the mission. In addition to providing Egypt with high level policy advice, technical assistance and technology transfer, the project was expected to generate actionable proposals which USAID could quickly translate into fundable projects for Washington approval. In short, USAID seemed to be delegating a lot of the responsibility for project design and selected implementation to the UC/D-ARE relationship. Given the circumstances of the time, this seemed to make a good deal of sense. In retrospect the problems which plagued the project in the beginning might have been anticipated. They were rooted in the unrealistic expectations about the capacity of American universities to provide such a wide range of services, the inexperience of UC/D in international development, the complexity of AID and UC/D procedures, and in the lack of a thorough understanding and acceptance of the basic goals of the project by the people called upon to implement it in 1979.

Because the Project did not and could not deliver all the goods and services expected, the USAID ultimately developed its agricultural portfolio outside the ADS, increasing its

staff in the meantime. By the time the project really gained momentum in 1980 most of the original assumptions had been overtaken by events.

Initial Egyptian expectations are hard to ascertain. As far as the MOA is concerned it is important to remember that since the germination of the ADS project there have been four ministers: Osman Badran, Abdel-Azim Abu al-Atta, Ibrahim Shukry and Muhammed Dawood. Although Mr. Badran visited California in early 1976 and, as a graduate of that system, had a preference for UC/D, it was Dr. Yussef Wally, a horticulturist and consultant to MOA, and Deputy Minister Salah al-Abd, who were the early activists. Significantly both cited horticulture and horticultural exports as being the priorities for ADS as far as the MOA was concerned, although Mr. al-Abd recalled that he was particularly concerned with citrus. In any event Dr. Wally visited Davis sometime in 1975 and Deputy Minister al-Abd was dispatched by Minister Abu al-Atta in the first half of 1976. Mr. Al-Abd recalls that UC/D seemed quite reluctant to get involved and that he had to pressure them quite heavily. Mr. Al Abd was the key Egyptian figure in these early months, and it is significant to note what he conceived the Project to be all about. When the first joint board was formed, Mr. Al-Abd headed it for MOA and Fred Hill for UC/Davis. Then Mr. Al-Abd left for a long MAO mission in Tanzania, Mr. Abu al-Atta visited UC/D in May/June 1976, and UC/Davis sent its first high level team to Egypt in October 25-29, 1976. In the wake of this visit, horticulture and agriculture

economics were identified as the first subprojects. It is clear however, that the California side was so basically unacquainted with Egypt that it did not know what it could do within ADS nor how it could derive any benefit from what it did undertake. Thus, while we can establish some sort of image of the initial expectations of the USAID mission and of the MOA, it is not clear what UC/D hoped to derive from it. Possibly the desire of University of California Administrators to shore up research and administrative overhead funds in the face of declining domestic sources played a role. In the midst of these early feelers Mr. Abu al-Atta was removed from the MOA and replaced by Ibrahim Shukry. In sum, as of December 1976 none of the original Egyptian advocates (i.e. Messrs. Badran, al-Abd, and Abu al-Atta) were any longer on the scene.

The seminal piece of correspondence in these early months was a USAID telegram, dated February 4, 1976, something like eight months before the PID was drawn up and approved. It noted, 1) that Mr. Osman Badran was interested in a long term relationship with a U.S. institution, 2) that the contractor should be able to assist in long-range policy and planning for agriculture development, including overview of entire agricultural planning process, 3) should be able to provide expertise in all aspects of irrigated agriculture in arid zone conditions, but "at a minimum in the fields of agricultural economics, agronomy, animal husbandry and agricultural/civil engineering, particularly in hydrology and irrigation.",

4) "In view agro-climatological similarities with California, as well as long term Egyptian relationships with California system"...the mission recommended UC/D as contractee.

The PID was approved in Washington D.C. in September 1976. The project paper was approved in relatively short time in June of 1977. The activities that eventually emerged from this bears virtually no resemblance to the mandate laid down in this document. To cite but one example:

"Project Purpose--

Improve the delivery of agricultural development services to small farmers by systematically strengthening the planning, implementation, and management of public sector agriculture and institutions."

On the strength of this USAID contracted (9/20/76) with UC/D to proceed with negotiations toward collaborative research under a host country contract with MOA.

In these as in many other documents the terms of reference for the ADS proved to be far too broad, and there is a real question whether or not UC/D was or is an appropriate contractee. UC/D has never contemplated, nor perhaps is it capable of fulfilling more than a fraction of the bill of goods indicated in the documents cited above.

The Negotiating Process

AID moved quickly to sign a Project Grant Agreement with ARE (9/29/77), but it was 15 months before the host-country contract between UC and MOA was signed (1/11/79). There were several causes for the long delays in reaching final agreement

1) On the Egyptian side, and perhaps the UC/D side as well, personalities inappropriate to promoting the project held key positions. For example, Minister Shukry was not directly involved in the Project and delegated responsibility for it to Hassan al-Tobgy, head of the Agricultural Research Institute.*

Dr. Al-Tobgy by all accounts conceived of the Project as of exclusive benefit to MOA and resisted UC/D and USAID pressure to bring Egyptian academics into the picture. It was at this point (see for example F. Hill to Robert Morrow, 1/4/78) that it looked as though all MOA wanted of ADS was outside funding for on-going research.

2) On the UC/D side the Project had turned into an "administration" venture, and regular faculty felt that they had not been sufficiently consulted in its development. One faculty member, now active on the Project later remarked, "We felt that the administration had made the deal, let them implement it." The initial and very high level UC/D mission of October 25-29, 1976 set the style. UC/D began to encounter difficulties in finding counterpart personnel. For instance, Alex McCalla of the agricultural economics department co-authored a paper with Frank Child (10/10/78) but disappeared from the Project thereafter. Faculty from Ag-economics were slow to show interest in ADS. It was not until the situation became an embarrassment for UC/D that senior faculty were moved to assume leadership. Many still doubt that their activities in Egypt have much benefit for them as individuals. Only senior horticulturalists had any incentives--and these mostly

* Based on interviews with Egyptian project leaders, 12/80.

non-professional--to participate in subprojects. We have been unable to find anywhere in the files made available to us any evidence that UC/D, as the "lead institution" in the UC/D system made any effort to systematically identify personnel throughout the system that could have played a role in ADS.

3) USAID built up its professional staff in agriculture as the months dragged by--they now have 12 specialists and feel more capable of doing for themselves much of what ADS was originally designed to undertake. In short, interest began to wane at UC/D because of the top-down approach and the lack of professional incentives; it never fired up in Egypt because of Dr. Al-Tobgy's resistance to including academics, and USAID began to contract with others for services ADS was to have provided.

4) between '77 and '79 negotiations were dragged out for months over the issue of the contractual liabilities of the University of California. The University continued to worry about the terms of reference in a host-country contract and had little precedent for this kind of relationship in their own experience. The tone of negotiations became excessively legalistic and frustration mounted on all sides.

In the course of the negotiations it became clear that the only area in which UC/D could crank up quickly was that of horticulture. In June of 1977 a high level horticultural team visited Egypt. Their report is revelatory of several of the difficulties the Project has encountered. First, the style is at times condescending and at others insulting.

It also cites the need in more than one place of studying and improving Egyptian extension services but makes no suggestion that UC/D should have any role in this. Some recommendations were naive to say the least: e.g. counter-part personnel should enjoy:

"Freedom from administrative control from either the MOA, universities, or National Research Center for Egyptian personnel, according to the stipulated FTE effort on the project."

Or, further, along:

"A very real but general constraint is that many of the problems of Egyptian horticulture (indeed Egyptian agriculture) appear to be rooted in the political, economic, sociological, and/or cultural characteristics of the Egyptians, and may not respond readily to simple technological changes and improvements."

Having said this, the report makes no further reference to these systemic difficulties. Nor do any others. In general critics of ADS insist on its neglect of social and institutional change which the critics regard as essential to effective technological change. Indeed, revised project papers suggest that there were no significant social impacts, but if there were, these would be analyzed and addressed in separate activity agreements. To date this has not occurred.

The Project Grant Agreement of 9/27/77, coming between the visit of the horticultural and the agricultural economics teams, reiterated the macro-goals of the Project, i.e. to "create an institutional capability to plan and conduct a broad range of work in agricultural development" leading to an "institutional framework and problem-solving experience (that) should provide a significant base from which to carry

out sustained programs in agricultural development." What this has meant in practice is that these goals will be met through collaborative research within the subprojects--no attention to institutional capacities per se is suggested. Moreover, as was pointed out time and again, the UC/D personnel are not comfortable with nor competent with policy-oriented research.

The final contract between UC/Davis and the MOA, signed in January 1979, listed a vast array of projects and goals, most of which have not yet received any proposals, descriptions or write-ups. They are listed on page 2 of the contract. Those that at the present time are inoperative:

development of new lands

cropping systems alternatives (new economic activity on medium staple cotton responds partially on this)

agricultural wastes and residues

oilseed crops

the use of brackish water

water management

fish culture

use of fertilizer

Of the possible benefits to Egypt mentioned, the following are not currently being met by any existing activity:

improve the ability of the MOA and related government institutions to analyze, plan, organize, implement, and evaluate the development of Egyptian agriculture,

improve the ability of other Egyptian institutions concerned with agriculture to study, analyze, and develop solutions to existing agricultural problems (except as occurs as a by product of joint research), identify, analyze and evaluate alternatives in agricultural policy to determine the priority needs of Egyptian agricultural development, and suggest alternative agricultural development plans.

Implementing the contract: Early Phase

By the time of the signing of the contract, Ibrahim Shukry and Hassan al Tobgy were no longer in the MOA, and the new Minister, Dawood, appointed Kamil Hindi, head of the Institute of Agricultural Economics and Statistics in MOA, as co-director. Claron Hesse served as project co-director for the first 16-17 months, but implementation was stalled over issues of incentive payments, subproject development, and administrative organization. Hesse was asked to resign in February 1980. At that time the Project had expended only \$ 382,000 and was clearly in trouble. Dr. Pierre Loiseaux, who had intended to do a study of legislation affecting the agricultural sector, was made UC co-director. Frank Child took over the position of UC coordinator from Fred Hill. On the USAID side the principals also changed. George Armstrong, a horticulturalist, took over the USAID liaison from Marcus Winter, an agricultural economist. Jerry Edwards, the head of the USAID Agricultural office, who had been responsible for developing the Project, left Cairo in June 1980.

There is no doubt that between 1977 and the spring of 1980 the mix of top administrators between UC/D and the MOA led to paralysis and put the Project in jeopardy. The new personnel is not without problems, however. Key Egyptian actors have come through a difficult period of political transition. They must look with some caution beyond the life of the Project. UC/D now has three full time residents in place: Co-Director, Pierre Loiseaux; Horticulture Project Co-Director, Ron Voss; Economics Project Co-Director, John Rowntree, and "Other Projects" Director, Talaat Shehata. This is a very welcome development, but with the exception of Dr. Shehata they have had little experience in Egypt or in other LDCs. The sometimes complex project politics with which they are involved, and which are inevitably linked to issues and coalitions that range far beyond ADS, can be confusing and frustrating. The UC/D personnel must develop the skill to understand and deal with them. Relevant figures in USAID should go beyond standard monitoring of ADS to follow in a non-threatening way, the progress of various activities.

II. PROJECT ORGANIZATION and IMPLEMENTATION

A. Project Decision-Making: Structure and Process

The ADS Project has a complex decision-making and management structure determined, in large part by the collaborative nature of the Project, the wide range of subjects involved, and the absence of a single Egyptian institution through which project administration is managed (other than the Project office).

The Project structure has been faithful to the original design in some if not all respects. A Joint Policy Planning Board exists, meeting together once a year. JPPB meetings do occur regularly for Davis staff under the leadership of Dr. Child and less frequently on the Egyptian side. In addition there are standing technical committees for horticulture and agricultural economics subprojects, each with joint membership. Since it was agreed in 1979 that the creation of new subprojects required time-consuming project amendments, ADS negotiated with AID an arrangement whereby new activities could be approved by agreement of the Joint Board without going through the AID amendment process. This has led to the creation of additional ad hoc expert committees for each new activity proposal. These committees then recommend funding to the technical committees if appropriate. Technical committees then review and frequently make recommendations for improving the proposal. Final approval is made by the JPPB on new activities outside the horticulture and agricultural economic areas. Otherwise decisions about the subproject activities are made by the joint directorate.

Additional coordinating mechanisms have included frequent trips between Davis and Egypt of the heads of technical committees, the Project coordinators and co-directors, principal investigators and other faculty exploring research possibilities. Another innovation on the agricultural economics side is the establishment of a bi-weekly meeting of team leaders. The purpose of these meetings is to discuss substantive issues, and to permit team leaders to make progress reports on various activities underway. Although the first meeting held in January 1981 was devoted largely to administrative issues, it appears that this has the potential for developing into a "peer review" series. Needless to say this will have to be developed carefully, as peer review is not a well established custom in Egypt.

To provide day-to-day management of the Project, ADS has two co-directors, Dr. Kamal Hindi and Dr. Pierre Loiseau. Major subprojects are administered by Dr. Azzouni and Dr. Voss for horticulture and Dr. Goueli and Dr. Rowntree for agricultural economics. Other activities are managed by Dr. Shehata, an Egyptian born U.S. citizen who is a graduate of Davis.

As noted elsewhere, most of the current leadership is relatively new to the Project especially on the American side. From their perspective, the Project really begins with their administration. Dr. Loiseau was appointed in May of 1980, followed by Rowntree in July and Voss in late August. The Egyptian half of the JPPB was also reorganized, with Dr. Wally re-emerging as the key spokesperson for the MOA. Dr. Goueli is

also relatively new to the Project. Thus this "interim evaluation" in one respect occurs only six months into the "Project"--although clearly some activities were well underway before their arrival. The point is that many formal and informal arrangements for project management are still being developed, communication between teams, technical committees and the JPPB are being worked out and the ability of UC/Davis technical leaders like Dr. Rappaport to respond to and deal with problems is improving. Unfortunately the project leaders inherit a history of management difficulties which tend to make their task much more laborious than would otherwise be the case.

In spite of recent improvements in project management, it must be recognized that a joint project is difficult to administer under the best of circumstances. Distances are great, formal communication by telex and telephone is no substitute for face to face contact, and cultural differences will create misunderstandings. Americans may not be as sensitive to status considerations as they should, particularly when there is great pressure to get things moving. Moreover, in a project with as many joint committees and such dispersion of decision-making authority as this one, conflicts will emerge and project momentum may suffer. For example project staff estimate that it has taken about eight months to a year to get an activity authorized. This is not an unusually long time within the context of a long term stream of research. However, it does have an effect on a project which is quite clearly faced with the problem of "playing catch up." If the average research activity in

agricultural economics takes two years to complete, and the bulk of those activities have been approved only in the last six months, the products may not begin to appear until the end of 1982 or early 1983. Anyone familiar with academic research unencumbered by long distance collaboration will realize that even a two-year span may be optimistic.

Playing catch up has other consequences for the Project as well. One of these is the difficulty project leadership finds in developing long rang objectives and coherent strategies for achieving them. Since this Project experienced so many problems in getting organized in the beginning-- many of the original purposes and objectives have become irrelevant or surpassed by events. Project management, including both Davis and MOA leaders, should find time to develop an intensive review of objectives, strategies and procedures clearly focused toward what can reasonably be accomplished by 1983.

B. Mobilizing Resources

As discussed in part I of this report, the Project had difficulty in mobilizing academic talent from UC/D, particularly in agricultural economics. The good marks received for going outside the system to recruit economists from North Carolina, Stanford and Oregon State were as much a product of desperation as they were considered judgement as to who was best for the job. Even on the horticultural side, leading scientists at the Davis campus were reluctant to get involved. Reasons for this reluctance are many, but principal among them must be the failure of project negotiators to

involve academic faculty from the beginning. Also the feeling that little benefit and perhaps real harm would be done to careers if one got sidetracked into a "foreign adventure" constrained younger scientists from getting involved. Furthermore, the natural constituency of development-oriented social scientists in fields like anthropology had little point of entry to the Project, once the subproject agendas were defined as fairly straightforward research and technology transfer projects. This replication of the disciplinary approach to problem-solving is not surprising--and exists at other universities as well. In the Davis case, the integration of various sub-disciplines of agricultural science is considered a major achievement--let alone bring "soft" disciplines into the arena. Whatever the cause, it wasn't until two senior faculty at Davis, Drs. Carter and Rappaport, were persuaded to assume leadership roles that other faculty began to get involved in significant numbers.

Another issue in this Project is the quality of resources mobilized. We cannot judge this except to report that Egyptian scientists apparently feel that the "best" people are not always being made available to them. This perception may be biased by a lack of understanding of the depth of the U.S. scientific establishment, or by the natural desire to be associated with leading figures in one's particular field. We must recognize, however, that there is an inherent problem in joint research between two sets of people, especially when the relationship has overtones of tutelage. A younger American

scientist may find himself working with a substantially older man who considers himself and is considered by his peers the leader in his field in Egypt. The American may have at hand all the panoply of contemporary research methods and equipment--his counterpart in Egypt none, and his opportunities to do research may have been severely limited. Collaborative research among American scholars is difficult enough--the typical ADS activity can be a minefield for even the most sensitive scholar. Unfortunately the human relations dimension of this Project has been fraught with such difficulties--and we fear that the end is not in sight. Project leadership at Davis is painfully aware of this problem--and have taken steps to prevent incidents and to smooth relationships.

One additional note on resource mobilization by Davis is worth mentioning. The basic mode of California involvement has been the short visit. Of 68 people who have travelled to Egypt since January of 1979, only 13 have returned for substantive followup work (see Appendix Table C). In terms of total days of actual followup technical assistance, not including the long term effort of Loiseaux, Voss and Rowntree, about 200 days in country has been spent by Davis faculty and other Americans. An exception to this is the three-month visit of Drs. Laidlow and Page on Beekeeping, which produced useful technical advice.

The value of these short trips, the average stay is 14 days, must be questioned. On the negative side, each trip consumes the time of Egyptian activity leaders--they are expensive, and the length of stay may be too short to

accomplish much if you discount holidays, jet lag recovery, and the time it takes to get around in Cairo. On the positive side, short repeated visits that are highly focused such as in the tomato activity are perceived as useful by Egyptians.

It is expected that the number of exploratory and feasibility study visits will diminish substantially in the remaining years of the contract--and the number of extended followup visits will increase. It is hoped that visits of two weeks or less will be discouraged by project leadership, and that UC/Davis will find ways to release time for faculty members to stay for longer periods in Egypt.

On the Egyptian side--the Project has been successful in mobilizing fairly large numbers of Egyptian scientists. The problem has been to train scientists in the formulation of research proposals suitable for funding by the Project. As discussed elsewhere, project staff have organized workshops to assist in this problem, with considerable success on the agricultural economics side. A workshop in horticulture is apparently planned for February.

One of the side effects of the rapid mobilization of Egyptian talent over the last six months may be to reduce the availability of Egyptians, especially in agricultural economics, for other projects being funded by AID. The upcoming agricultural statistics and policy project may find that the available pool of qualified agricultural economists is already working at full capacity. Designers of new projects should

proceed carefully with respect to expectations about the available pool of talent for new activities in this field.

C. Incentives for Research

We have already discussed the problem of incentives for California scientists to get involved in joint research activities. Egyptian scientists, particularly those trained in the west, also have opportunities to work elsewhere. The introduction of incentive payments for Egyptians is a partial solution to this problem. Egyptian scholars engaged in project activities receive an incentive pay higher than they earn in their formal jobs with the ministry or university. (See Appendix Table G). These payments, it is felt, will elicit commitment from scientists and reduce the tendency to "moonlight." The incentive payment was originally resisted by the MOA and by USAID, but it has since become a model for other USAID projects and is seen as a major institutional change. Project staff hope that in the long run, the higher scale will encourage the Ministry to raise salaries. The longer term question, of course, is whether the government will be willing to continue some form of incentive payments after the Project is completed.

D. Trilateral Relationships

Although ADS is a host country contract between UC/Davis and the MOA, there are serious problems which affect all three parties, UC/Davis, the MOA and USAID. USAID staff feels they have been totally excluded from the substantive issues of the Project. They complain that they receive only vouchers,

with very little substantive documentation of progress. In their view, the project leadership, especially on the California side, has kept AID at arms length, giving up information only when asked, and in many cases not even then. This had lead to frustration, some bitterness, and a number of attempts to bypass the project. On the California side, the view is that AID had a chance to be involved, California wanted a USAID-California project, and wanted AID representation on the JPPB which AID declined. Further, they may well feel that USAID lacks the time, competence and interest to be substantively involved, and cite instances where project proposals were sent to USAID and nothing more was heard. As we have observed elsewhere, there is little in the files to indicate a dialogue on substance between USAID and the contractors. Thus there is resentment and hostility on the Davis side as well. We do not intend to go into the reasons for this--they have to do with the long gestation period, the ambivalence of the present USAID's staff about the value of host country contracts, and feeling on Davis's part that only they and the Egyptians are really competent to deal with the issues.

On the Egyptian side, views differ depending on whether one is a "ministry" man or an academic. Ministry people at the MOA departmental level do not feel that their departments are getting much out of the Project even though ministry employees do benefit. Egyptian academic scientists are much more positive--and find real benefits from the opportunity

to do useful research. When pushed, many Egyptians feel that the California leadership is really in the driver's seat-- and cite California's apparent reluctance to go outside their system for expertise.

It is difficult for an outside evaluator to sort out these claims and allegations and it is not our job to do so. We do, however, conclude that a very serious problem exists--and if the Project is to develop into one with lasting benefits for Egypt, ways must be found to correct the situation. One first step would be for ADS to improve its reporting and communication process, both with respect to internal communications as well as with USAID. On the USAID side, ways must be found to get involved in substantive implementation--if only in an advisory capacity; USAID cannot remain a passive actor if it wants to have any influence over the outcome. On the Egyptian side, the problem is more fundamental. Project leadership must make up its mind whether the purpose is to improve selected institutions, horticultural and agricultural economic scientific research in general, or short term technology transfer. Admittedly, the original project called for all of these, but project dynamics have lead to what appears to be an ad hoc process governed by a distributive logic, i.e. a little bit for everyone. This is not to say that useful and productive activities are not underway--as we discuss in detail below there are significant potential accomplishments--but the overall program appears to lack coherence and focus. This is especially troublesome when we project to 1983 and ask, if the Project is not

continued what will be its accomplishments--how will they stack up against the expectations of the Project Paper-- and what is the chance that the broad spectrum of individual activities now underway will continue to receive institutional and budgetary support from the government?

E. Financial Status

A detailed financial analysis was not within the scope of this evaluation. This section merely provides a brief overview of the costs of activities implemented thus far by the Project.

The financial picture of the Project is somewhat hazy. It is difficult to ascertain exactly how much has actually been spent. Several of the reasons for this hazy situation are apparent. As the first agricultural project funded by AID through a "host country contract," there was little precedent for the design of an accounting system which would meet the requirements of AID, UC/D and the Ministry of Agriculture.

The ADS project is basically the familiar cost reimbursement type contract. However, there has been a sequence of amendments, cash advances, and items disallowed on vouchers. Compounding the situation has been a complete turnover of the UC/D staff involved in the administration of the Project, and at least two planning grant contracts which preceded the implementation of the primary contract.

To further complicate the financial picture, there are three separate accounts which fund project activities:

a) a dollar account administered by UC/D; b) an Egyptian

pound account administered by UC/D; and c) an Egyptian pound drawing account allocated by the Ministry of Agriculture primarily to pay salary incentives to its personnel who collaborate in the Project. The brief financial overview presented herewith refers only to the two accounts administered by UC/D.

A summary of dollars and pounds reimbursed to UC/D by USAID/Cairo is presented in Table 1. As of January 20, 1981, the total amounts were U.S. \$ 2,230,667 million and L.E. 792,960.

There is an inherent time lag associated with the processing of vouchers for the Project, so these amounts are approximations only. The time lag can be appreciated by tracing the path of each Project voucher. Every dollar account voucher follows the same journey:

1. UC/Davis makes invoice and sends it
2. to the UC/Davis Office in Cairo who sends it
3. to the Ministry for attaching the Certificate of Performance
4. Ministry sends it to USAID Controllers Office logging which sends it
5. to the Project Officer for review and administrative approval.
6. the Project Officer returns it to the Controllers Office for final review and USAID Certification. After this the USAID CON telegrams the AID/W Controllers Office to order an electronic fund transfer to UC/Davis.

Because the host country contractual arrangement of the Project is being used as a model for other agricultural projects (such as the Major Cereals Improvement Project)

Table 1. Summary of ADS Expenditures

Processed by AID/Cairo as of January 27, 1981

<u>Voucher period</u>	<u>Egyptian pounds</u>	<u>Dollars</u>	<u>Total dollar equivalent</u>
1/11/79-11/30/80	792,960 ^a	2,230,677 ^b	3,363,404 ^c

- Notes:
- a) Includes a cash advance of L.E. 150,000
 - b) Includes a cash advance of U.S. \$ 550,000
 - c) Calculated at U.S. \$ 1 = L.E. 1.4285

Sources: Summarized from data provided by Pierre Loiseaux, UC/Davis, and verified by Dale Stewart, AID/Cairo.

the implications for other projects are obvious. At the very least, a better data flow between the ADS accounting unit and the UC/Davis accounting unit must be developed.

Overall, the three current research categories (Horticulture, Economics and Miscellaneous) have committed at least \$ 5.6 million over the projected life of the Project. A summary of these projections is presented in Table 2.

In addition, another \$ 1.2 million has been committed to the outfitting of the central laboratory at Cairo University. Furthermore, an unspecified additional amount will be spent on the satellite laboratory near Alexandria. It should be noted that these laboratory facilities will support only the horticultural research--they are not suited for research in other potential ADS project areas such as livestock.

To date, at least \$ 3.2 million has been obligated for the twelve current horticultural research activities. A summary of the budgets of these projects is present in Table 3. These research activities range in direct cost from \$ 85,485 (olive propagation) to \$ 571,802 (tomato trials). In order to derive meaningful results, however, it is apparent that at least several of these activities would have to be extended beyond the presently projected life of the Project.

The addendum to the ADS contract which created the Horticulture Subproject contemplated about 25 research activities over the life of the Project. The estimated total dollar equivalent direct and indirect cost for these 25 horticultural activities is \$ 2,963,007. Thus the average

Table 2. Summary of Research Activity Budgets
for Life of Project (as of 1/21/81)

<u>Subproject</u>	<u>Amount (\$)</u>	<u>Amount (L.E.)</u>	<u>Total dollar equivalent</u>
Horticulture	1,176,241	1,454,299	3,253,696
Economics	1,035,324	756,283	2,115,667
Miscellaneous	<u>-162,827</u>	<u>85,069</u>	<u>284,346</u>
Totals	\$ 2,374,392	LE 2,295,651	\$ 5,653,709

Source: Derived from activity agreements and budgets
provided by Pierre Loiseaux, UC/D, January 21, 1981

Table 3. Budgets for Research Activities for Life of Project--Horticultural Subproject

<u>Date of Agreement</u>	<u>Title</u>	<u>Amount (\$)</u>	<u>Amount (L.E.)</u>	<u>Total Dollar Equivalent</u>
7/23/80	Identification and control of the limiting factors which cause low yield in <u>citrus</u>	134,320	237,444	473,508
7/23/80	Integrated research for increasing production and improving quality of <u>tomatoes</u>	188,363	268,421	571,802
7/23/80	Deciduous <u>fruits</u>	127,362	75,959	235,869
7/23/80	<u>Mango</u> inflorescence malformation cause and control	71,107	94,499	206,098
10/12/80	Integrated research for the improvement of <u>garlic</u> production	104,538	170,685	348,361
10/12/80	Integrated research for the improvement of <u>cucurbit</u> varieties	180,279	223,575	499,651
7/23/80	<u>Postharvest</u> activity, phase one	83,045	112,986	244,445
7/21/80	Mist Propagation of <u>olives</u>	64,237	14,875	85,485
1/13/81	Improved production of <u>aromatic plants</u>	62,685	47,860	131,053
1/13/81	Production and handling of <u>cut flowers</u> for export	47,390	78,660	159,755
1/13/81	Improved techniques for the <u>nursery industry</u>	61,170	68,925	159,629
1/13/81	Evaluation of new <u>ornamental crops</u>	51,745	60,410	138,040
	Totals	\$ 1,176,241	LE 1,454,299	\$ 3,253,696

Source: Activity agreements and budgets provided by Pierre Loiseau, UC/D, January 20, 1981

research activity was to cost about \$ 118,520. However, the twelve current horticultural activities to which ADS has obligated funding thus far average \$ 271,041 each. Therefore, it appears that UC/D has over-obligated on horticultural research at both the aggregate and average activity levels.

The Economics Subproject has currently obligated at least \$ 2.1 million in direct costs to 13 different research activities. A summary of the projected budgets of these activities is presented in Table 4. The individual research activities range from \$ 29,720 (impact of partial market pricing on land and water allocation) to \$ 271,041 (agricultural employment and rural labor supply) over the life of the Project. The cost of several economic studies is considerably above that of research conducted in the U.S., but it should be kept in mind that the number of persons involved in each project activity has been increased both to meet the "collaboration" criterion and to provide research training for more participants. On the average, however, costs appear to fall within the estimates in the addendum to the ADS contract which established the Economics Subproject. In that addendum (signed 3/20/80 by UC/D and 2/20/80 by MOA), total research activity costs for the life of the Project were estimated at \$ 2,664,532. This figure was based on a total of 16 economic research activities during the life of the Project. Thus the estimated cost was \$ 166,533 per activity. The average estimated cost of the 13 implemented projects is \$ 162,743.

Tables 4. Budgets for Research Activities for Life of Project--Economics Subproject

<u>Date of Agreement</u>	<u>Title</u>	<u>Amount (\$)</u>	<u>Amount (L.E.)</u>	<u>Total Dollar Equivalent</u>
8/4/80	<u>Agricultural employment and rural labor supply</u>	83,328	233,611	417,041
10/ 9/80	Price policy and <u>food subsidies</u>	73,840	43,076	135,374
7/21/80	Agricultural <u>pricing policies</u> and balance of trade	25,330	5,000	32,472
8/ 4/80	Impact of partial market pricing on <u>land and water allocation</u>	23,378	4,440	29,720
10/ 9/80	<u>Marketing</u> potential for vegetables	61,889	48,849	131,669
11/26/80	<u>Food consumption</u> in rural Egypt	95,214	49,360	165,724
12/ 4/80	<u>Livestock</u> and livestock products in the Egyptian economy	82,280	61,820	170,589
12/ 4/80	Demand for <u>mechanization</u>	81,580	54,174	158,967
11/26/80	<u>Food security</u> and agricultural price policy	196,148	111,164	354,945
12/ 4/80	<u>Cotton</u> markets and policy	116,230	38,254	170,875
1/15/81	<u>Irrigation</u> evaluation	103,592	70,533	204,348
1/19/81	Integrated <u>village studies</u> and policy evaluation	74,725	23,930	108,909
1/14/81	Efficiency of the Egyptian <u>farm</u>	17,790	12,072	35,034
	Totals	\$ 1,035,324	LB 756,283	\$ 2,115,667

Source: Activity agreements and budgets provided by Pierre Loiseau, UC/D, January 20, 1981

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In summary, it is apparent that the Project has made considerable progress during the last several months and this burst of activity is reflected in the financial area. Applying the terms of reference stated in the ADS contract, however, funds appear to have been over-obligated in several areas.

III. ASSESSMENT OF PROJECT ACCOMPLISHMENTS

A. Appropriate Criteria

Any project normally should be evaluated primarily in terms of 1) the extent to which it has accomplished the objectives set for it by the project contract, noting 2) any concomitant accomplishments or side effects, positive or negative, that the Project may have had. It is also appropriate to inquire whether, in retrospect, the objectives set for the Project in the beginning were realistic. If they were not, the Project should not be condemned for not accomplishing that which under the prevailing circumstances it could not.

Previous sections of this report have pointed out 1) that this Project was set up with extremely broad objectives better suited for the total agricultural program of AID in a country than for a single project; 2) that AID soon became aware of that and proceeded to set up additional projects to tackle particular narrower agricultural problems, each under a separate contractor and 3) the University of California/Davis activated two sets of research activities--one related to horticultural crops and the other in the field of agricultural economics--plus a few minor miscellaneous activities.

Under these circumstances, what questions might appropriately be asked in trying to evaluate the performance of the ADS Project to date:

First, have the activities activated by the ADS Project within its terms of reference been as stated in the main contract?

Here the answer is clearly "yes."

Second, has the University of California moved expeditiously in getting underway the research activities on which it chose to concentrate? Here the answer is less clear. It is true that the idea of the Project was first bruited in 1974, the University of California was first approached and it stated its willingness to participate in 1976, the main contract was signed in January 1979 and the Addenda approving the Horticultural and Economic Subprojects were signed in September 1979 and March 1980 respectively. It cannot now be ascertained how much of that long gestation period can be attributed to the University of California, how much to AID and how much to the ARE. What can be stated is that since the two Subprojects were authorized progress in implementation, while not rapid, are improving.

Third, in the light of the above, the valid criteria for evaluating the Project would seem to be primarily to measure activities to date against the activities projected in the Subprojects--horticultural research and economic research, with the starting dates taken as September 1979 in the case of horticultural research and March 1980 in the case of economic research.

B. Criteria for Horticultural and Agricultural Economics Subprojects

1. Horticultural subproject

As stated in the relevant Addendum (page 5) the goal of the Horticultural subproject is "to create a greater capacity within the Egyptian research community

to plan, undertake, complete and extend research and technology in the horticultural sector of crop production, handling and extension through the development of cooperative research activities between the University of California and Egyptian research institutions."*

Consequently, the pertinent evaluative questions to be addressed include the following:

- a) What research activities have been undertaken? When was each of them launched? When is it anticipated that each will be completed?
- b) How relevant is each of those activities to the goal of the subproject?
- c) To what extent have the activities undertaken been truly collaborative between the University of California and Egyptian research institutions?

* The scope of activities considered essential to reaching the goal of the Horticultural Subproject are listed as "purposes" on page 5 of the relevant Addendum:

- (1) to develop information for Egyptian horticultural enterprises which will better enable them to supply nutritious fruits and vegetables in quantities ample for the increasing domestic demand and of a quality that will further penetrate the export markets of Arab countries, Europe, and southeast Asia.
- (2) to increase the productivity of vegetable and fruit crops on a per-area basis.

d) What Egyptian research institutions have been involved?

e) Will completion of the research institutions underway or currently contemplated enable the sub-project to achieve its goal? To what extent can that be done by 1983?

2. Agricultural Economics Subproject

The goal of this subproject is "to enhance the contribution of agriculture to economic growth, productivity and income, and to increase the level of economic well-being and political stability of the Egyptian society."

(3) to identify optimum crops and site (area) crop situations to maximize the production of horticultural crops.

(4) to improve the post-harvest handling of fruits and vegetables in both the domestic and export markets through appropriately designed research.

(5) to encourage interdisciplinary research in areas basic to the future development and growth of strong horticultural enterprises in Egypt.

(6) to identify significant constraints on attainment of the above-mentioned objectives and to recommend to the JPPB and the ARE the development of new activities to overcome such restraints.

The purpose to be served by this particular Project is "to strengthen the capacity of the Ministry of Agriculture and other government and non-government Egyptian institutions" :

- a) to identify agricultural problems or issues,
- b) to analyze them,
- c) to provide policy alternatives, and
- d) to select and implement policy.

"The Project provides for research activities as well as formal and informal training programs. It further provides for feasibility and project design studies, consultancies and technology transfers. It is anticipated that the collaborative relationship will benefit the university by providing faculty, staff, and students with research opportunities which will increase knowledge and skills in agricultural and related disciplines."*

Some of the evaluative questions to be addressed with respect to this subproject are identical with those for the horticultural subproject:

* These statements regarding goal and purposes are to be found on page 1 of the document "Economics Subproject of the Agricultural Development Systems Project in Egypt." They are referred to, but not repeated, in the relevant Addendum.

- 1) What research activities have been undertaken? When was each of them launched? When is it anticipated that each will be completed?
- 2) How relevant is each of those activities to the goal and purposes of the subproject?
- 3) To what extent have the activities undertaken been truly collaborative between the University of California and Egyptian research institutions?
- 4) What Egyptian research institutions have been involved?
- 5) Will completion of the research activities now underway or currently contemplated enable the subproject to achieve its goal? To what extent can that be done by September 30, 1983?

But there is an important additional question to be addressed with respect to the Economics Subproject.

It has to do with the appropriateness of participation by a U.S. university especially with respect to the fourth purpose of the subproject, namely, "to select and implement policy." A U.S. university normally engages in identifying economic problems or issues impinging on agriculture, in analyzing them, and sometimes suggesting policy alternatives but it does not participate, as a university, in "selecting and implementing policy."

And there are agricultural problems and issues that are not primarily economic in nature but which have economic aspects that need attention (such as economic and social

implications of proposed changes in agronomic practices being examined in the Horticultural Subproject).

These considerations suggest the following evaluative questions:

6) How appropriate are the purposes of the subproject for participation by a U.S. university?

7) Is provision being made for investigation of the economic implications of the questions being addressed in the Horticultural Subproject?

C. Assessment of Project Accomplishments

1. The Horticultural Subproject

The purpose of this section is to briefly review the current activities of the Horticultural Subproject. Judgement on the scientific quality of the particular research activities is beyond the scope of this evaluation.

The present activities of Horticultural Subproject consist primarily of 12 different research activities and the establishment of a central laboratory facility.

The research activities focus on the following topics:

1) citrus; 2) tomatoes; 3) deciduous fruits; 4) mango; 5) garlic; 6) cucurbits; 7) aromatic plants; 8) cut flowers; 9) ornamental crops; 10) the nursery industry; 11) olives; and 12) post-harvest activity. These 12 activities together are budgeted for about \$ 3.2 million over the life of the Project. The budgets are listed in Table 3.

The central research laboratory being established at Cairo is budgeted for a total cost of over \$ 1.2 million. A smaller "satellite" laboratory is also being established near Alexandria.

At the present, there are at least 285 Egyptian scientists involved in the horticultural component of ADS. This number includes only the professional personnel receiving salary incentives from ADS. In addition, an unknown number of field laborers and other workers are involved in the various projects.

The Horticultural Subproject was the first implemented activity of ADS, and the tomato field trials initiated in 1980 were the first actual plantings undertaken by ADS.

The tomato activity, which primarily consists of performance trials of California varieties under Egyptian conditions, has been described as merely "technology transfer." Administrators at UC/Davis described the tomato activity as a necessary demonstration of their ability in Egypt prior to attempting to exert influence on Egyptian agricultural pricing policy. At any rate, the tomato trials provided the first visible evidence that the ADS Project had reached the activity implementation stage.

Overall, the horticultural research project seems to be addressing some of the significant--if not top priority--problems of Egyptian agriculture. However, horticultural research is a time-consuming process subject to the constraints of biological and seasonal cycles.

Progress in annual crops such as tomatoes can be measured in terms of several years, especially under the double-cropping and triple-cropping permitted by the Egyptian climate. Research in orchard plants such as citrus, however, may require longer periods to achieve scientific progress.

Of the eleven research activities currently implemented in horticulture, all but one are budgeted to last for the duration of the ADS Project.* A number of the Egyptian researchers interviewed by the evaluation team, however, indicated that time (and resources) beyond the duration of ADS will be necessary to provide conclusive results.

The central research laboratory being established at Cairo University by ADS is far from being operational. As yet, the facility has not been wired for electricity. None of the equipment has been installed, and the UC/D staff is uncertain as to the future date at which the laboratory will be functional.

The status of the proposed satellite laboratory near Alexandria is even more uncertain. A budget for this facility was not available, and its very existence is only vaguely mentioned in the Project documents.

A number of activity areas and objectives stated in the Horticultural Subproject Plan have not yet been implemented by ADS. Although a community development and agricultural extension team from UC/D did visit Egypt,

* Until September, 1983

there is no evidence that the Project directors are addressing the question of the Extension Service. According to the plan, extension publications were to be developed in Arabic and English.

Furthermore, the horticulture plan clearly states that the resources of other U.S. institutions will be made available to all Egyptian researchers and cooperators in the subproject. Interviews with several Egyptian researchers indicated that such has not been the case.

Among the "important assumptions" listed in the logical framework of the project plan are the following: 1) prices to farmers will increase and encourage production; and 2) a more effective extension service develops. The question of agricultural price policy and agricultural extension are also within the broader objectives of ADS. Within the Horticultural Subproject, however, neither topic is currently being addressed.

Considered together, the Horticultural Subproject is lacking in a number of basic areas:

- a) There are no defined objectives for the overall research effort.
- b) There is virtually no relationship between the Horticultural Subproject and the Economics Subproject.
- c) To date, at least eight Egyptian universities and institutes are involved in the research projects. However, the laboratory facility is

located at Cairo University. Policies for the assured access of scientists from MOA and other universities have not been developed, although at least one senior Egyptian leader insists this will not be a problem.

- d) The funding, staffing, maintenance and control of the central laboratory beyond the life of the ADS Project has not been specified.
- e) There is apparently no provision for the extension of the forthcoming research finding to farmers.
- f) The training component of the Project seems to be an ad hoc process rather than a planned statement of policy and procedures.
- g) An apparent reluctance of ADS administrators to go outside of the UC/D campus to find U.S. collaborators for Egyptian researchers.

On the positive side, there are a number of merits to the current activities of the Horticultural Subproject. After a slow start, there has been a notable acceleration of research activities. Having a full time UC/D scientist posted in Cairo for a 12 month period should eliminate many of the delays which characterized the earlier stages of ADS.

Furthermore, several other positive aspects of the project deserve mention:

- a) The central research laboratory for horticultural experiments is clearly needed in Egypt.
- b) The laboratory is located on the campus of a

- c) The leadership of the Horticultural Subproject now appears to be in capable and energetic hands at UC/D, the Ministry of Agriculture and ADS.
- d) A large fraction of the entire Egyptian horticultural research establishment has been reached by the Project. The commitment to ADS-sponsored projects by the several Egyptian researchers interviewed by the evaluation team seems genuine.

2. Central Laboratory

We suggest that early attention needs to be given to clarifying the post-project management of the Central Horticultural Laboratory. Who is to manage it? Who is to have access to use it?

There are definite statements in Project documents that all equipment purchased for the Project as a whole will become the property of the Ministry of Agriculture after the Project is concluded. There are statements also that the Central Horticultural Laboratory will be managed by the Ministry of Agriculture.

Yet the building in which the Laboratory is being developed belongs to the University of Cairo. Will the building be transferred to the Ministry of Agriculture? How binding is the agreement that that will take place?

If the Laboratory is to be operated by the Ministry of Agriculture, will scientists from all universities be eligible to use it? It certainly seems to be that

that is the intent. But we find no evidence of a formal agreement to that effect and when such agreement has been made clear by what procedure will university scientists gain access to using the Laboratory. Will there be some sort of a joint managing entity or will use by university scientists be at the discretion of the Ministry of Agriculture?

If these questions are not clarified early in the duration of the Project it may lead to conflicts which will thwart the objective of creating the laboratory in the first place.

3. Agricultural Economics Subprojects

This subproject has weathered long periods of stagnation due mainly to staffing problems. It was not until the spring of 1980 that any of its activities were begun. Since then, and especially between November 1980 and January 1981 some fifteen activities have been approved and at least eleven now have signed activity agreements.

The reasons for the long delay in starting-up are worth exploring. Principal among them was the reluctance of economists at UC/D to become involved, a fact that did not go unnoticed by their Egyptian peers. Dr. Sayyid Gaballah, himself an agricultural economist, and co-director of the agricultural economics subproject, tried to bring colleagues from Wisconsin into the picture but was unsuccessful. Finally Frank Child went outside UC/D to find appropriate counterparts from Stanford, Santa Cruz,

Oregon State, Arizona, and North Carolina State.

His efforts, coupled with the replacement of Dr. Gaballah by Dr. Goueli and the arrival of John Rowntree in Cairo have finally generated a good deal of momentum.

In the early design of the subproject six major areas of research were identified.

- | | |
|---|----------------|
| a) Pricing Policy | (4 activities) |
| b) Agriculture Marketing | (1 activity) |
| c) Human Capital and Rural Institutions | (4 activities) |
| d) Allocation of Development Resources | (0 activities) |
| e) Food Security | (4 activities) |
| f) Land and Water Use | (1 activity) |

Although very unevenly distributed, research activities are now underway or planned under each of these rubrics except "d" (list of activities is seen in Table 4). In addition there is a study of the demand for mechanization that fits under none of them.

In general, it is too early to assess the progress and results of any of these activities. The study on rural labor markets is the furthest along, having completed a first round of surveys. The others have either just begun a phase of reviewing existing research and identifying data sources or have not begun formal activity at all.

One of the potential problems of this subproject is that the results of its various activities will not be integrated into any kind of macro-view of the agricultural

sector. One has the sense that the advice of Frank Child and Alex McCalla (10/10/78) has not been heeded:

"For proper management of the complex agricultural sector we need to know, in some detail, the economic and physical relations we are dealing with. The first step is an estimate of what prices and outputs would be in the absence of present price and quantity controls. Policy decisions will appropriately follow careful study of just where Egypt's economic advantage lies. Understanding of the interrelationships with the economy as a whole is especially critical if one contemplates changing policy."

In fairness it should be noted that the Egyptian side has not indicated that it needs more of the macro-view than it already has, but at a more modest level research findings could be profitably integrated. For example, three highly interrelated activities are being carried out through Zagazig University: demand for farm mechanization, rural labor markets, and livestock and livestock products. After initial findings have been written up it would be useful to try to draw general conclusions, perhaps in workshop setting, about the trade offs among animals, people, and machines in the Egyptian countryside.

In another vein, the activities of the subproject have paid little attention to the horticultural subproject. Only the Simmons-Salem study on the "Marketing Potential for Vegetables" bears upon horticulture. If there is room for additional activities in agricultural economics, high priority should be given to dealing with the economic issues implicit in the agronomic research of the horticultural subproject.

Reliable data sources will be crucial to most of these activities. At least five of them (livestock, mechanization, price policy and food security, medium-staple cotton, food subsidies) plan to draw upon the Farm Management Survey. Analysis of the data in this survey has languished for a number of years, and it is very important that its processing be completed at the earliest possible moment.

The agricultural economics subproject, like ADS itself, is supposed to have an important training or human capital formation component. It is assumed that this will take place through collaborative research efforts in the various activities. In the write-up of the subproject in spring 1979 it was predicted that:

"At the end of the project, 150-195 Egyptian economists will have participated in and completed collaborative research activities. There will be 60 UC faculty members and graduate students who will have participated and will, hopefully, have acquired an on-going interest in Egypt and the Egyptian economy."

The numbers on the Egyptian side may not be far from the mark, but the transfer of analytic skills will not occur automatically. The Egyptian researchers with whom UC investigators will work have highly varied backgrounds, training and levels of competence. A handful have done advanced degrees in the U.S., a much larger contingent obtained their doctorates in Egypt, but the largest group consists of Ph.D.s from the Soviet Union and Eastern Europe. They are recipients of degrees that

have been described as glorified MAs or MScs. The first Egyptians to go abroad for these degrees were dismayed to find that they would not, in the USSR, be allowed to continue on for a full-fledged doctorate. When the students protested, an Egyptian higher committee granted equivalency with an Egyptian Ph.D. to the Soviet "candidate" or MA level degree. All universities and public research bodies now have large numbers of people trained in this manner during the 1960s. Of 21 Ph.D.s on the staff of the Institute of Agricultural Economics (MOA) fourteen received their degrees in the USSR and Eastern Europe.

The presence of large numbers of researchers whose training is in many ways deficient offers the subproject a difficult challenge but some interesting opportunities as well. If collaborative efforts are intended to produce sophisticated scholarly papers and analyses, the risk would be that collaboration would take place mainly between the Americans and the few Egyptians who already have a good grasp of the basic research methodologies. Those whose skills most need to be improved could find themselves marginal spectators to the activities. It seems likely, moreover, that the socialist-trained researchers will have fewer opportunities to join in the money-making game in other Arab countries. Thus from the point of view of building institutional capabilities it is particularly important that these persons

be reached in a meaningful way for they will be the back bone of future research efforts. The price may be to slow down the research process and employ relatively less sophisticated analytical techniques, and UC/D counterparts may not be prepared to enter into such a tutelary role. Still the problem is there and must be recognized.

Another problem that must be faced is that of the concentration or dispersion of research funds. So far the entire ADS Project has been characterized by disbursing research money to as wide a network of institutions and persons as possible. This may preclude concentrating resources on those persons and institutions that have demonstrated capacity to further the research. Given the nature of the Egyptian research "community," both in the universities, the ministries and bodies like the Institute of National Planning, and the fact that for decades they have all been starved for funds, it is inevitable that the politics of the situation will dictate as wide a dispersion of funds as possible. ADS appears to have learned how to live with that situation.

4. Other Activities

This category of funds has been used for a variety of purposes. These include development of feasibility studies not directly under the two subprojects, training, special workshops, etc. The "other" category has been

a useful and flexible generator of activities such as the Library Study, the Development of a Small Power Unit for Water Lifting, the Agricultural Law Study and Improved Breeding of Honey Bees. Studies like Integrated Pest Management and Olive Production originally began in this category. Should the Training Program and several projects now under consideration be further developed--this will become a significant "category" of activity. (A list of these activities is seen in Table 5.)

5. Generating Fundable Projects

The principal spin-off from this Project to date has been the agricultural statistics and policy advisory project. It is in final stages of preparation by USAID, based in part on a preliminary feasibility study by ADS. Opinions seem to differ between ADS staff and USAID as to whether this project was "taken away" from ADS--or ADS believed its role was to do the feasibility study only. One interpretation of the original project paper would suggest this would become a major function of ADS. That it did not in spite of USAID's expectations may have been a wise choice by UC/Davis, given their capabilities and interests.

Several new feasibility studies with recommendations for ADS activity have recently been completed. These are: 1) formation of a National Agricultural Library and Documentation Service, August, 1980; 2) report on Feasibility of Food Science and Technology Activity (Draft 1/7/81)

and 3) Development of Animal Production in Egypt (Draft 10/14/80). Although we did not have time or expertise to undertake detailed analysis of these new studies the following points are relevant. First, two of the three, Food Science and Animal Production call for additional studies. Neither contain very detailed research approaches, although the Animal Production Study is closer to that than the Food Science report. Neither contain budgetary information. Presumably a good deal more effort will be required to translate these into new activities.

The agricultural library project is much more developed and contains a useful assessment of existing libraries and the problems of developing an information system for Egyptian agriculture. The proposed amount to be funded by ADS is not clear, but the additional direct costs to the project seem to be in the order of one half million dollars. However, it appears that substantial additional funding would be required to make the proposed service fully operational. The report recommends that the project should be discussed with AID officials before proceeding. We could not determine if such discussions had taken place.

It should be noted that the library study, prepared by Richard Blanchard, University Librarian Emeritus, is based on a 34 day stay in Egypt, the Livestock Study; 10 days by two persons, and the Food Science Study; 6 days. The quality of each study reflects the amount of time taken to develop them.

6. Implementing Selected Development Activities

The project paper called for ADS to implement selected developments in addition to funding joint research. Although in the general sense, the subprojects are selected development activities most of the activities fall into a joint research category. The only development activity being implemented is the Central Laboratory project. We discuss this under the horticultural subproject (III. C. 2. and 3.).

From a more generous perspective it can be said that many of the subproject activities would be considered new technical assistance projects in the context of every AID program worldwide except Egypt. Although most of the activities are small grants, five or six of them have project-like characteristics; budgets of over one-half million dollars, staff having a division of labor, local and U.S. technicians, commodity procurement, etc. These include: citrus, tomatoes, cucurbit, mango and deciduous fruits.

However, the team concludes that the gap between original intent and present activities is great and project expectations should be revised to conform with the realities of the situation.

7. Institutional Development and Training

Though progress is being made on a number of fronts, the overall institutional development strategy of the Project is not well defined or clearly articulated.

There are many choices which should have been made at the beginning about which organizations were to be strengthened, what kind of skills were needed and for whom, and what level of training was required. Thought needed to be given to structural constraints related to improving the utilization of human capital, including relationships between ministries and academic personnel, and among different disciplines which could contribute to solving problems in agriculture.

It must be recalled that the original underlying purpose of this Project was to reduce the fragmentation of agencies, departments, research institutions, and other establishments competing for limited resources for agriculture. This meant that the JPPB would become a major institution capable of addressing problems or organizational integration and coordination. By implication it also meant that needs would be identified, priorities established, and order brought to the system. Obviously this was a very difficult change to carry out.

Institutional change, particularly where agencies and organizations are entrenched and have a history, is very difficult to accomplish in any society. It is always easier to establish new institutions than to get rid of old ones. It is usually easier to equally distribute new sources of income (such as ADS) to existing organizations and people than to build new ones. It is most difficult to select several entities for dramatic improvement, to the detriment of

of others. Often when such efforts are made through foreign assistance programs, when the Project is over and the assistance is furnished, the favored organizations are cut back to size. The dilemma for the Project which wants quality results in a hurry is how to achieve them without distorting the distribution of benefits to the many in favor of the few.* These are difficult choices to make--and we can understand the project administrators' reluctance to deal with them. As discussed in other parts of this paper, the Egyptian institutional environment is complex, and perhaps the present approach is the best that could be done.

The project design, with its broad and perhaps unrealistic purposes, presented the leadership with a difficult task. Policy and production relevant results were desired as quickly as possible. This would mean an institutional strategy of going with strength and making upgrading of existing skills a principal objective. It was also desired that institutional capabilities should be improved, particularly within the MOA. This would mean making the GOE departments the prime recipient of project benefits, but might not result in rapid, high quality research results. Finally, the objective of improving the general fund of human capital available to

* This is not unlike the oft perceived trade off between increasing agricultural production and achieving broad distribution of benefits from an agricultural project.

invest in agricultural problem-solving would dictate a well designed but comprehensive training program which would reach out to university scientists and ministry professionals not limited to MOA. Immediate research payoff and the strengthening of any particular organization would be subordinated to long term human capital formation goals. It does not appear that these choices and their trade offs have been squarely faced by the Project. Rather, project leaders believe that by establishing collaborative research projects, the principal mode of activity, improvement in skills of collaborating scientists will occur.

The method of achieving collaboration is to have one to three U.S. researchers as participants in each research activity, with each U.S. participant visiting the Project in Egypt one to three times each year for one to four weeks each time, and to have each Egyptian team leader confer at Davis with the U.S. participant(s) at least once and sometimes more than once within the duration of the activity.

It is an expensive way to achieve collaboration and it appears to constitute "minimum participation" by U.S. scientists--much less than could be achieved by having more U.S. scientists full time in Egypt for periods of one or two years or more.

At the same time it has advantages. It can enlist

U.S. scientists who probably would not be available for longer periods in Egypt. It can achieve the participation of U.S. specialists with respect to each particular type of research activity. It gives the Egyptian Team Leaders an opportunity to get acquainted with research resources and activities at Davis.

Those advantages may make the present mode of operation cost effective, given the reasonably high level of competence of the Team Leaders. They all have had Ph.D. training. They already hold positions of influence in the MOA or in their respective universities. They are 30 to 50 years of age.*

U.S. scientists may or may not be able to do all they can with respect to upgrading the skills of Team Leaders within the present pattern of very short occasional visits but they clearly can do very little to help train investigators and research assistants. And the time requirements for useful U.S. participation in all research activities cannot be met by one longer term U.S. scientist for each subproject.

At present the institutional development activities of the Project are gaining momentum. Both subproject co-directors propose holding workshops and seminars for their investigators. One workshop has been held by the Agricultural Economics group. This had a positive effect

* See Issue Paper V. A.--for further discussion of this point.

on the production of research proposals. According to project staff further work needs to be done to improve the ability of Egyptian scientists to prepare research proposals for funding. Another workshop is planned for horticultural scientists in February 1981.

In addition to the program of workshops and seminars held in-country, project leaders point to several other activities which reflect concrete progress towards the institutional and development goals of the Project.

These include:

- a) establishment of a Central Lab for horticulture research on the Cairo University campus,
- b) integration of ministry and university professionals through research activities,
- c) the establishment of incentive payments to gain commitment from Egyptian scientists,
- d) long and short term training at UC/D and elsewhere in the UC system, and
- e) proposed creation of a National Agricultural Library in the Ministry of Agriculture.

Each of these activities is worthwhile and does contribute to increasing both institutional capability as well as human capital formation. Each one is also subject to criticism from several perspectives. Our central point here is not to assess them individually, but to point out that they do not add up to an institutional development strategy for the Project. Rather

they tend to reflect the ad hoc process of decision-making which is characteristic of the entire enterprise.

As discussed throughout this report one of the general purposes of this Project was training of Egyptian scientists. The bulk of this training occurs in two ways; one, through collaborative research and, two, through workshops and seminars held in Egypt. In addition training opportunities are available to Egyptians in California through the activity agreements or separately. The Egyptians which have so far been to the U.S. for various types and duration are categorized below.

Table 6.

Egyptian Scientists in the U.S. with ADS

<u>Type</u>	<u>Number</u>	<u>Length of Stay (average)</u>
Consultation on projects	11	6 - 20 days
Short term intensive study	7	3 - 6 months
Long term study	2	1 year

(Based on information provided by ADS Project office travel to US/D, 1/24/81 . A list of UC/D trips is seen in Appendix Table D.)

The Project has not yet developed a training strategy or overcome difficult obstacles normally faced in such programs. The obstacles include finding appropriate candidates, insuring that their training is relevant, and dealing with American University entrance requirements. We recognize the value of the short term

intensive study trips, and would like to see them increased; we believe more could be done to develop the long term opportunities for training Egyptian scientists.

IV. PROJECTING END OF PROJECT STATUS

A. Potential Impact on Research Activities and Capabilities

By September 1983, the Economics Subproject can be expected to have completed about twenty research activities, 12 of which are already underway with estimated completion dates ranging from December 1981 to November 1982. (Most of them are scheduled to require about two years each. That seems long in view of the objective of undertaking only activities promising a quick payoff but may be largely due to the fact that most Egyptian participants are on only half-time appointments in the Project).

By that time, between 150 and 200 Egyptian economists will have had their skills enhanced by experience within the Project.

In addition, the practice of cooperation among economists from different universities and between those in universities and in the MOA will have been practiced for a period of four years and a set of additional research needs of high priority to Egypt should have been identified.

It is difficult at this time to project what should have been accomplished by the Horticultural Subproject by 1983, primarily because many of the phenomena it must deal with involve plant growth, with all of the seasonality which that implies. Testing present varieties or developing new varieties of annual crops (including vegetables) takes anywhere from three to six or more years. Doing the same for tree crops (including fruits) normally takes much longer. Substantial progress should have been made by 1983 in the

Post-Harvest activity. Identification of the limiting factors causing low yields in citrus may have been achieved but control of some of those limiting factors may take much longer. Research to increase production and improve the quality of tomatoes, garlic, and cucurbits should be well started by 1983 and a production payoff with respect to them is expected by MOA. The length of time required to improve deciduous fruits and to end mango inflorescence malformation is indeterminant.

Two measures important to success with respect to all of those would have been substantially achieved by 1983. One is completion of the Central Horticultural Laboratory (and hopefully, in addition, appropriate equipping of 6 to 10 research substations). The other is upgrading the research skills of 200 to 250 Egyptian personnel engaged in the various horticultural research activities.

And here, as in the Economics Subproject, a pattern of cooperation among university scientists and those in the Ministry of Agriculture should have been established.

A key question with respect to all research activities is the extent to which activities launched by the Project can be expected to persist after the Project ends. There seems to be good reason for pessimism at this point. Egyptian participants are motivated to a considerable degree by the incentive pay and their work is expedited by the equipment, travel arrangements, and other administrative support which the Project provides. To what extent will universities

and the MOA take steps to encourage continuation? Is there anything the Project can do to improve the prospects? Those questions should receive serious attention in the near future.

B. Extension Activities

The only place where extension activities are mentioned in papers related to the ADS Project is in the "Project Paper: Agricultural Development Systems: Egypt 263-0041" dated May 1977 on page 41 which speaks of a "feasibility study and subproject design for agricultural extension improvement."

A feasibility study was submitted in 1980, but was unacceptable to GOE and UC/Davis. According to project officers a new team was proposed, but rejected by the GOE. The issue is now dead for all practical purposes.

It remains to be seen how, if the horticultural research projects are successful in finding ways to improve productivity, the knowledge and technology will be transferred to the farmer. There may be many ways to do this, including use of the extension service. Some "extension" will occur from the demonstration effect of horticultural field trials in farmers' fields, beginning this year in the tomato activity.

The end-users of the research results flowing from the Economic Subproject--at least from the type of research activities so far undertaken or contemplated--are not farmers but policy-makers. Getting research results to policy-makers is therefore the appropriate analog to getting research results to farmers where the research is pertinent to farm-level decision-making rather than to national policy-making.

If more is to be undertaken by AID in the field of agricultural extension it probably should take the form of a separate project, rather than trying to incorporate it in the ADS Project. What we hear about current Egyptian "extension" activities suggests that what may be needed involves an extensive overhaul of the present system and the development of a pattern of extension activities uniquely geared to the peculiar needs of Egyptian agriculture.

It would appear likely that what is needed is not a replication of the U.S. extension approach. What appears to be in place in Egypt now is primarily a staff of the Ministry of Agriculture widely located throughout the countryside with the primary task of securing farmer compliance with nationally-determined commodity production plans. That role is not "extension" in the American sense. It appears still to leave the need for institutional means of getting information regarding farm production to the farmers. But adequately meeting that need within the Egyptian context will be complex and difficult--too complex, difficult and different from other ADS activities to try to tackle it within the present Project.

C. Agricultural Policy Impact

The project paper places a high degree of confidence in agricultural economists, operating in their traditional organizational setting and using their conventional data base and analytical techniques, to influence agricultural policy and thereby to improve performance in the agricultural

sector. Key project assumptions are that the Ministry of Agriculture is primarily responsible for agricultural policy, and that agricultural policy could be based mainly on conditions and demands of the agricultural sector. The assumed connection between professional agricultural economists and agricultural policy is misplaced in the Egyptian context. First, the Ministry of Agriculture shares policy-making responsibility with other ministries, and the central ministries (Planning, Economy, and Finance) have the final say in such matters as farm prices. Second, the government's political objectives, notably consumer price stability, played at least as important a role as the interests of farmers in setting agricultural prices.

There are also several reasons connected to the Project why the policy advisory role has not materialized. The original resident project staff for California consisted of horticultural scientists who were understandably more responsive to requests from their Egyptian colleagues in this discipline than from agricultural economists. Second, the conduct of agricultural economics research, which would be relevant to policy-makers, required a great deal more location-specific information about Egyptian conditions and the Egyptian policy process than the California staff members could reasonably be expected to have. California agricultural economists could design research of a background nature in absentia (though they could not supervise its execution-- a real problem in Egypt), but then it ran the risk of being

irrelevant to decision-making. Third, it is unclear that the Egyptian Ministry of Agriculture, for whatever reason, really welcomed close U.S. involvement (albeit unofficial) in its decision-making processes, or even in decision-making about recommendations that would be forwarded to the Cabinet for resolution.

This is not to say that the research agenda in the agriculture economics subproject will not be policy-relevant; much of it will be. However, opportunities to influence policy will probably be much less frequent than the original Project objectives contemplated.

V. CONCLUSIONS

A. Summary of Findings, Issues

The principal conclusions from this evaluation are as follows:

1. Extreme delays in contract negotiation and implementation significantly reduced the relevance of the original project purposes established for ADS.
2. An inexperienced and reluctant institution, UC/Davis, was asked to undertake an unrealistically broad project.
3. Relationships between the USAID and ADS have become strained and communication on substance close to impossible.
4. Since 1980, and to some degree before, substantial progress has been made in a number of activities--nearly all of which are both useful and consistent with the terms of the Project.
5. In spite of the recent burst of activity and the good intent and energy of the present leadership, the actual end of project status will not approximate end of project estimates in the project paper.
6. The Project has succeeded in enrolling and energizing a large number of Egyptian scientists who may be expected to benefit in a variety of ways from the opportunity to engage in joint research.
7. The agricultural economics subproject may have succeeded in capturing most of the present agricultural economics talent in Egypt--which, if true,

has implications for other USAID projects forthcoming.

8. The Project has made a good start in developing collaborative relationships between MOA professionals and academic scientists. Whether this collaboration will survive the end of the Project is open to question.
9. The establishment of a Central Laboratory for Horticulture is needed to improve the institutional support structure for research in this field. In addition regional research centers are poorly equipped, making it difficult for staff to conduct research. The Central Laboratory alone is not an adequate solution to this problem.
10. Although research activities in horticulture and agricultural economics are potentially useful to improving Egyptian agriculture, ways to insure that the product of these efforts can be quickly and effectively utilized are not adequately addressed.
11. Financial management, especially reporting, has been inadequate in several respects. It is extremely difficult to reconcile expenditure figures between USAID accounts and those of the Project office.

Other, more detailed findings are contained in the body of this report. Recommendations for action follow in the next section.

B. Recommendations

1. General

- a) USAID should conduct a major revision of the project paper to more realistically define objectives, terms of reference, and reporting procedures appropriate to the capabilities and activities of the Project. This revision should be used as an opportunity for all parties--MOA, UC/Davis and USAID--to establish clear and mutually acceptable understanding of objectives and strategies for reaching them.
- b) If such a revision is successfully completed, we recommend that the period of the contract be extended by two years. The horticultural research already undertaken cannot be completed within the approved duration of the Project; most of the economic research activities can be, but institutionalizing arrangements for training and carrying on collaborative research cannot be.
- c) Because elements of ADS have influenced other large and critical mission projects, the mission should consider undertaking a comparative in-depth assessment of all similar projects to determine if similar problems exist.
- d) Given the quite different disciplinary specifications involved in the horticultural and agricultural economic subprojects, two different AID

officers, each with appropriate disciplinary backgrounds, should be assigned the task of monitoring the two subprojects. In addition, it would help if these AID monitoring officers were invited to attend meetings of the Technical Committees and Team Leaders meetings of the two subprojects respectively as observers as a means of keeping AID/Cairo better informed about activities within the Project.

2. Procedures and General Project Activities

- a) Attention needs to be given to developing a definite strategy for training and institutional development within the Project. Everyone rightly considered training an important function but so far it appears to be implemented in a haphazard fashion. Longer term institutional development objectives should be clearly stated with a concrete plan developed for achieving them.
- b) Ways need to be found to improve communications and interaction between the Project and AID/Cairo and in a manner that does not impinge on the prerogatives of the contractor. USAID cannot rely on the voucher approval process to have substantive influence over activities of ADS. It must be prepared to invest its competence and interest in the ongoing work of ADS. Substantive implementation should replace procedural implementation.

- c) Short term visits of U.S. scientists to Egypt should never be shorter than 12 working days after a two-day jet lag adjustment period and whenever possible they should be twice that long. We recognize the pressure to keep them short because of commitments at U.S. home institutions but very brief visits cannot be effective and they can be insulting to Egyptians.
- d) The University of California should make greater efforts to enlist the participation of U.S. scientists from institutions other than its own, especially in the case of horticulture from other states with experience in the same crops.
- e) We commend the practice of having regular meetings of team leaders in each subproject. They can serve a valuable training function. To do that they need to be focused on substantive research issues. They should not be administrative.
- f) We recommend that the Project drop the proposal that it engage in a major subproject for the general improvement of Egyptian extension services. The task in that field is too complex and what Egypt needs is probably quite different from what the U.S. has. The Project should, however, seek to improve extension with respect to the crops with which it deals in the Horticultural Subproject.

- g) We recommend that proposed activities such as Livestock and Food Science be carefully coordinated with USAID before approval. This does not imply a USAID veto power but is intended to improve project information about other activities in the agricultural sector and to sharpen the relevance and focus of new activities.
- h) The proposal substantially to improve access to agricultural library resources is a good one, but may be too narrowly founded on the central library concept. If it is to be implemented we are uncertain as to whether it should be done within the ADS Project or should be entrusted to a separate AID-funded Project. In implementing it the major emphasis should be on creating an operating infrastructure for the management of information to assure the easy availability of information to all agricultural researchers in Egypt. The acquisition of a comprehensive set of books and periodicals is important but will only be worthwhile if an efficient institutional framework for the system, appropriate under existing circumstances in Egypt, is put in place.
- i) We recommend that UC/D require a 24-month tour in Egypt for long term personnel posted to the Project. Prior to the completion of a 24-month tour, the replacement personnel should over-lap the

out-going person by at least 3 months to insure effective continuity of the Project. In lieu of the present pattern of two-week short-term visits, UC/D should post co-leaders in the areas of greatest research intensity to Egypt for 3- to 6-month tours. More longer-term U.S. scientists are needed to compensate for the present pattern of infrequent and brief visits.

3. Recommendations - Horticulture Subproject

- a) Despite the recommendation that the ADS Project not undertake a major effort in the field of extension we recommend that the Horticultural Subproject retain its intention to develop an information service to farmers. That is a much less ambitious objective than a general development of extension services and is needed in connection with enlisting farmer participation in its research activities.
- b) We would stress that early agreement needs to be reached with respect to the management of the Central Horticultural Laboratory to assure that, although managed by the MOA all Egyptian horticultural researchers have adequate access to using it both within the Project and after the Project has ended.
- c) We recommend that serious consideration be given to the training of some MOA Egyptians at the

M.S. level. The current training focus on post-Ph.D. training has many limitations.

- d) A "research findings bulletin" should be published in Arabic on a regular basis and distributed to the widest possible audience.

4. Recommendations - Agricultural Economics Subproject

- a) In any additional research activities undertaken preference should be given to exploring economic aspects of the research activities of the Horticultural Subproject. Such economic research should predominate but economic research should not be wholly limited to it.
- b) Research requiring highly sophisticated research methodology should be eligible for inclusion in the subproject but only where the proposed research is directly relevant to immediate needs in Egypt and where the level of competence of available Egyptian researchers is reasonably adequate.

C. Lessons Learned

It is appropriate to stand back from the country and project specific conclusions and recommendations to ponder whether there are more general lessons for AID in this Project. We believe that there are, and we submit them as tentative lessons for consideration.

- 1. We cannot expect to "wholesale" large sectors of our responsibility for project design and implementation

and still expect to retain substantive influence over the project as it is implemented.

2. In host country contracts, special care must be taken in the selection of the contracting organization. This is the only point of substantive control AID legitimately has in such contracts. Failure to make a wise choice at this point may lead to unfortunate outcomes.
3. In selecting American universities to implement AID programs, we must be aware that these institutions are organized for research and teaching, primarily influenced by the scientific agendas of a highly developed industry and agriculture. They should not be expected to carry out programs for which they are neither prepared nor inclined.
4. Broad gauge programs of action with many purposes and activities are difficult to squeeze into the project format. Ways must be found to fund flexible programs of action when needed without AID losing responsibility for outcomes.
5. AID must find ways whereby project officers are competent to do and rewarded for substantive implementation and project progress. It is institutional wisdom in AID that officers are rewarded more for project design than for implementation. To the extent this is true, it should be redressed. Our underlying hypothesis is that officers are rewarded more for

creative and literate writing, than for either good design or implementation. It is distressing to note that increasingly the actual feasibility and design work of projects is "wholesaled" as well. Thus project designers become expert at translating other people's work into AID jargon and format, and project implementors become obsessed and consumed with vouchers, waivers and myriad procedural details. We might be better served by staffing our missions with English majors and lawyers.

6. Building institutions and supporting agricultural research involves long term commitment. This will come as no surprise. Again and again these long term processes are given inadequate time frames and inappropriate measures of accomplishment--resulting in sometimes foolish and wasteful decisions and expenditures. We observe project contractors racing to obligate funds the same way AID races to develop projects. Where money is no object, which is never really the case, one always can hope that something good will happen.

VI. SOME PRINCIPAL ISSUES FOR AID

A. Mobilizing American Expertise: The Role of Universities

Two assumptions appear to have been made by AID during the period when the ADS Project was being discussed and initiated. One was that the activities of the Project would be very broad, encompassing "program-planning, project selection, and the design and supplementation of selected (agricultural) development activities." The second was that members of the faculty of the University of California possessed most of the U.S. expertise that would be required.

As the formulation of the activities to be incorporated in the Project proceeded, however, the activities selected turned out to be almost entirely research projects with associated training activities instead of the much broader range of activities initially contemplated. The UC/D has reached out to recruit economists for much of the U.S. expertise needed in the Economic Subproject primarily because not enough UC/D economists could be interested in participating. It has not enlisted non UC/D horticulturists even when they were interested in participating, apparently wishing to limit projects to fields in which US/D felt that it had adequately competent personnel who were willing to participate.

U.S. Participating Scientists

	<u>Horticultural Subproject:</u>	<u>Economics Subproject</u>
From University of California	7	9
From Elsewhere	0	8

These developments could have been anticipated had those who designed the Project and who chose the UC/D as the U.S. cooperating institution taken into consideration the changing nature and current role of Land Grant Universities in the U.S.

Early in their history the Land Grant Universities were a reaction against the pattern of classical colleges and universities. In the beginning, they were to concentrate on teaching whatever rural adults needed to learn with respect to "agriculture and the mechanic arts" regardless of the academic quality of those activities. Somewhat later they developed research programs--highly applied research related to farmers' and other rural adults current needs. Later still they came to embrace extension activities--extending their teaching activities to rural people where they live.

By the 1940's, however, some of the Land Grant Colleges were rebelling against being considered "cow colleges" and were seeking to emulate the major private universities instead of being different from them. As the techniques of scientific study became more sophisticated the land grant colleges shifted much of their research away from its earlier applied form geared to current rural needs and toward research to push back the frontier of knowledge in the various scientific disciplines. One after another the Land Grant Colleges changed their names to become Land Grant Universities.

The result has been that, at the present time, most faculty members of Land Grant Universities are experts in conducting sophisticated research in various disciplinary

fields and prefer to do that kind of research whenever they can; it leads to more professional prestige. They are experts in training graduate students each to conduct research in one highly specialized disciplinary field. Most of them still participate in extension programs for rural people but farming, itself, has become more sophisticated and the nature of extension activities has changed to conform to that trend. U.S. extension has taken a form (1) that is appropriate in a highly organized system of agricultural production in which farming is highly commercialized, (2) with the private sector meeting most of the needs for the distribution of inputs and the marketing of farm products and a lesser but significant portion of the needs for farm credit and (3) farmers have many sources of information and reach out for it.

Moreover, in all three activities--research, teaching and extension--faculty members are experts at pursuing their objectives within a setting of the logistical and administrative support of a highly developed university; they are not experts at creating such institutions.

Several Land Grant Universities, especially 20 to 30 years ago, conducted very successful technical assistance programs in developing countries. They saw their objective as being to upgrade existing agricultural universities and in some cases to create new ones, but no more than that. They sent out teams of six to twelve persons almost always for terms of two years and many persons returned to the field for second and third two-year assignments. Today, with the premier

requirement for high-quality research as the basis of career advancement, fewer and fewer persons are willing to take even short overseas assignments. That is particularly true of universities like the University of California which have gone farthest in adjusting to the needs of highly specialized agricultural production.

As for U.S. universities as recruiters of persons other than their own faculty members for work abroad they have no special advantage over any other contractor. The people they know are researchers, and they are for the most part, researchers in U.S. universities and/or in the USDA.

This is not to say that U.S. universities can no longer participate effectively in overseas activities. It is only to say that for them to do so is to engage in activities other than those in which they normally engage in the U.S. and that the type of activity in which they do have a comparative advantage is in participating in research rather than in institution-building or in the management of "agricultural development systems" other than research systems. And in selecting among possible research activities, universities tend to favor those in which they have in-house expertise rather than those for which they would have to go outside to get competent participants.

In choosing among U.S. universities to select those to undertake overseas assignments it is important to consider what internal infrastructure each university has developed to handle such assignments. Some universities are eager to

undertake overseas activities, partly out of a sense of noblesse oblige and partly to internationalize the outlook of their faculty and students. They have created offices to manage international programs, procedures for giving career credit for serving overseas, and high level access to university administration for directors of international programs. Having such an infrastructure in place is probably a more important qualification of a university for undertaking overseas assignments than is its general academic prestige.

The University of California is good at conducting sophisticated research and at training post-graduate students. It is not conspicuously enthusiastic about engaging in international programs (although some of its faculty members are) and it does not have a well developed organization structure for administering them.

Another issue is the contractual framework by which university expertise is brought to bear on development problems. The ADS Project was implemented within what AID calls a host-country contract. Under such an arrangement AID first negotiates an agreement with an entity of a host government (in this case the Ministry of Agriculture) to carry out a designated scope of activities. The host government entity, in turn contracts with a U.S. institution to provide selected types of technical collaboration and/or logistical support in furtherance of the agreed project objectives.

Thus, in theory, when AID enters into such a contract it delegates its authority as to how the Project is to be

conducted (subject to standard AID procedures and regulations) and over the selection of collaborating U.S. institution(s), to the host government entity.

Another characteristic of this particular contract is that AID was to fund it on a cost-reimbursible basis. As a result, although AID had been cut off from having responsibility for substantive project implementation it continued necessary for AID/Cairo to approve all Project vouchers in order to document expenditures for purposes of cost-reimbursement. This puts AID in the position of being required to approve expenditures which it had no hand in authorizing.

The situation is further complicated by the fact that AID financial contributions to the Project were to be handled and accounted for by the University of California/Davis. All expenditures with respect to U.S. participating scientists and long term UC/D personnel in Egypt are approved and paid by UC/D Project Administrators in Davis. All other expenditures of Project funds in Egypt are authorized by the two Co-Directors of the Project (one Egyptian and one U.S.). This seems clear-cut, but the facts that 1) so much of the total disbursement of funds is in the hands of the UC/Davis in Davis and; 2) the UC/Davis Co-Director in Egypt has to concur in each disbursement of funds in Egypt seems to Egyptians seriously to limit the authority that would be presumed to have been delegated to the Ministry of Agriculture by a host-country contract.

The competence of a Land Grant University to implement a project of the size and scope of ADS can be gauged before the fact. If one knows where to look, there are many indicators of university commitment to international activities. Based on interviews with UC/Davis personnel in both Davis and Cairo, the university did not rank high in the area of international capability when selected for the ADS Project. Indeed, UC/Davis does not rank high in its international capability today.*

In universities where there is to be a true commitment to international agriculture, there must be reward systems for the teaching and research faculty who will actually staff and backstop international development activities.

At the very least, faculty tenure and promotion policies must clearly recognize the value to the university of having teachers and researchers involved in international agricultural development activities. The director of international agriculture must have direct access to and regular contact with the chief executive officer of the university.

* It is interesting to note that nowhere in the Project files or in discussions with individuals is there evidence that any other institution was seriously considered for this Project.

Standing faculty working committees or international agriculture must be established and consulted by administrators as international opportunities become available. Foreign language training must be made available to appropriate faculty and staff. A directory of faculty and staff with previous international experience and foreign language ability must be compiled and constantly up-dated. Regular seminars and guest speakers on international topics must be used to promote contact among faculty of different disciplines. Younger faculty who are interested in international work--but inexperienced--must be included in planning trips so as to gain experience by travelling with experienced colleagues.

Unfortunately, none of these indicators of institutional commitment to international agriculture rank high at UC/Davis. Furthermore, UC/Davis does not appear to earn high marks on a number of secondary indicators of university commitment to international programs. UC/Davis has generally been reluctant to perform the lead institution broker role originally envisioned by mission leadership. A university well developed in international agriculture recognizes that when in-house expertise is not available, colleagues at other institutions must be utilized. Additionally, the person selected as project director must be posted to the project side with sufficient administrative authority and experience to effectively manage the Project. Such was not the case in the early months of ADS.

B. Egyptian Expectations Regarding Technical Assistance

The horticulture and agriculture economics subprojects fit into the government's plans for developing the agricultural sector. Together they form an integral whole for implementing a high value crop production and export marketing strategy for sectoral growth. The requirements of this strategy are at both the policy and technological levels. Phasing out of the controls which dictate the cultivation of lower value, basic crops is essential, as is the technological upgrading of the horticultural sub-sector. California was seen as making a contribution at both levels. To what extent has it contributed, in fact? Actual implementation has tended to be diverted from goal-oriented activities directly related to the objective of implementing the high value, export marketing strategy and towards system maintenance for the agricultural research establishment through general purpose funding (e.g. for training, lab equipment, miscellaneous studies, etc.). A number of factors account for the limited extent to which the project promoted the growth strategy:

1. lack of clarity regarding project goal (starting with the project paper),
2. lack of integration between horticultural and agricultural economics research,
3. lack of central direction in tasking scientists and reliance on the (non-competitive) small grants format,

4. addition to new, extraneous goals to the Project (training, equipment, miscellaneous studies, etc.),
5. lack of a connection between the Project and the food processing industry; overemphasis on production instead of marketing aspects of the growth strategy.

In other words, while the selection of California was to a degree sentimental, the design of the subprojects is consistent with the direction many Egyptians (including the Minister) want their agriculture to go. There is an alternative direction which is being "covered" by the Major Cereals project, which is the autarchic one of trying to achieve self-sufficiency in basic crops. These and the other AID projects are seen by the Ministry as flexible, rapid response means for achieving national objectives (the government must regularly defend the projects in the National Assembly on the grounds that they are in the interest of national development). While we agree that the ADS has been a highly flexible instrument for getting activities started, we question the extent to which results will be "rapid" in their consequences. With the exception of some horticultural activities, e.g., tomatoes and garlic, much of the research has a time horizon which exceeds the life of this Project.

APPENDIX TABLES

A through H

APPENDIX A.

CHRONOLOGY OF EVENTS:

ADS, 1976 - 1981

Appendix Table A . CHRONOLOGY OF EVENTS: ADS, 1976 - 1981

1976

- 10/ 1/76 UC/D awarded contract AID/NE-C-1269
in amount of \$ 418,416 for 27 month
period
- 10/ /76 UC/D team arrives to plan ADS under funding
of AID/NE-C-1269 (planning grant)

1977

- 4/16/77 UC/D awarded contract AID/NE-C-1345 for \$3,700
for reconnaissance survey of ADS (4/16/77-5/30/77)
- 6/10/77 ADS project paper facesheet signed by AID/Cairo
- 6/ /77 ADS contract amended (planning grant)
- 9/ /77 ADS project paper approved
- 9/ /77 ADS contract amended (planning grant)
- 9/29/77 The ADS project grant agreement is signed for
\$11.0 million plus \$ 3.606 in U.S. supplied EP
plus EP 3.3 to be provided by GOE
- 10/ 1/77 UC/D requests ADS contract amendment to permit
both Horticultural and Agricultural Economics
subprojects (proposed time span of 10/1/77-9/30/78)
- 10/ /77 ADS contract amended (planning grant)

1978

- 3/ /78 First meeting of Joint Policy and Planning Board of ADS
- 4/ /78 UC/D posts administrative officer for ADS to Cairo
- 5/12/78 Contractor performance evaluation report for
planning contract AID/NE-C-1269 rates UC/D as
"outstanding" at 6 on scale of 1-7
(for period 10/1/76-5/12/78)
- 9/23/78 Presidential decree No. 447-1978 approves
ADS project #263-0041

CHRONOLOGY OF EVENTS: ADS

Appendix Table A. (cont'd)

1978 (cont')

- 10/ /78 UC/D posts first chief of party for ADS to Cairo after withdrawing two previous candidates - both of which were approved by GOE and AID/Cairo
- 12/ 8/78 AID/C cable informs UC/D of presidential decree of 9/23/78 formally approving ADS

1979

- 1/11/79 Host country contract signed by UC/D and GOE
- 4/ /79 Proposal for ADS Horticulture Subproject submitted to AID by UC/D
- 5/22/79 Horticulture Subproject plan for ADS is signed by UC/D and MOA
- 6/ /79 Horticulture Subproject approved by AID with reservations on the institutionalization process expressed to GOE (the process appeared very weak)
- 7/ /79 Dr. Frank Child named by UC/D to serve as campus coordinator for ADS
- 8/30/79 Proposal for Agricultural Economics Subproject submitted to AID by UC/D
- 8/30/79 Agricultural Economics Subproject plan for ADS is signed by UC/D and MOA
- 9/ 1/79 ADS project contract amended at request of UC/D to develop the Horticulture Subproject
- 10/ 3/79 Cumulative expenditures for ADS contract 263-0041 listed as \$ 163,780
- 11/ 2/79 Cumulative expenditures for ADS contract 263-0041 listed as \$ 207,586

20

CHRONOLOGY OF EVENTS: ADS

Appendix Table A. (cont'd)

1980

- 1/ 9/80 AID/C contacts Michigan State University to explore having MSU do research originally planned for ADS in area of agricultural economics
- 2/ 1/80 ADS project contract amended at request of UC/D to develop the Agricultural Economics Subproject
- 3/ 4/80 Cumulative expenditures for ADS contract 263-0041 listed as \$ 381,674
- 3/26/80 Contractor performance evaluation report for planning contract AID/NE-C-1269 rates UC/D at 4 on scale of 1-7
- 5/ 8/80 Contractor performance evaluation report for planning contract AID/NE-C-1345 rates UC/D as "very close to unsatisfactory" (3 on scale of 1-7)
- 5/10/80 UC/D posts new chief of party for ADS to Cairo
- 5/15/80 Necessity of strong extension component in every agricultural production activity noted in UC/D report
- 6/ 3/80 UC/D informs AID/C of John Rowntree's designation as Associate Director for Economics and Social Sciences of ADS
- 6/ 6/80 First UC/D chief of party for ADS departs Egypt
- 6/ 9/80 UC/D informs AID/C of Ronald Voss's designation as Horticulture Subproject director
- 7/21/80 John Rowntree posted to Cairo as Associate Director for Economics of ADS
- 6/19/80 Cumulative expenditures for ADS contract 263-0041 listed as \$ 706,321
- 7/10/80 Cumulative expenditures for ADS contract 263-0041 listed as \$ 811,322
- 8/28/80 Ronald Voss posted to Cairo as Associate Director for Horticulture of ADS
- 10/ 8/80 Dr. Frank Child informs all ADS participants that Dr. Harold Carter is now chairman of ADS Economics Technical Committee

APPENDIX B.

PROJECT OBLIGATIONS AND EXPENDITURES

Appendix Table B:

Project Obligations and Expenditures:
 Agricultural Development Systems, (263-0041)
 University of California (Davis)

<u>Period</u>	<u>Obligations</u>	<u>Expenditures</u>
-----Dollar accounts-----		
- 5/30/77	7,000	6,969
10/ 1/77 - 3/31/78	15,000	15,000
- 6/30/81	235,300	217,039 (as of 11/30/80)
1/11/79 - 4/30/80	1,200,000	708,400
		377,000
1/11/79 - 4/30/80	3,800,000	-
4/30/80 - 9/ 1/83	<u>3,968,644</u>	-
		<u>-</u>
Totals	\$ 9,225,944	\$ 1,324,408
-----Egyptian Pound accounts-----		
1/11/79 - 9/ 1/83	L.E. 1,220,000	L.E. 485,923 (as of 10/31/80)
1/11/79 - 9/ 1/83	<u>2,751,950</u>	<u>50,766</u> (as of 11/30/80)
Totals	L.E. 3,971,950	L.E. 536,689

Notes:

- a) Dollar expenditures as percentage of life of project obligations = 14.3%
- b) Pound expenditures as percentage of life of project obligations = 13.5%

Source: Mr. Dale Stewart
 Controllers Office
 US/AID Cairo
 January 20, 1981

APPENDIX C.

TRAVEL TO EGYPT SPONSORED BY ADS PROJECT

(1/79 - 10/80)

Appendix Table C: Travel to Egypt sponsored by
ADS Project (1/79 - 10/80)

<u>Name of Traveller</u>	<u>Trip No.</u>	<u>Number of Days</u>	<u>Purpose of Trip</u>
J. Neil Rutger	1	10	?
P. Loiseaux	1	28	Review of Egypt. Ag. Laws.
	2	24	" " " " "
	3	-	Assume responsibility as Chief of Party
Frank Child	1	10	Consult with Co-Directors on various aspects
	2	13	Confer with Co-Directors
	3	18	Consult with Co-Directors
	4	10	" " "
Alan G. Marr	1	10	Consult with Co-Directors on various aspects of Project
	2	8	JPPB Meeting
Noel Sommer	1	11	Hort. Tech. Comm. Team Visit
Pete Catlin	1	11	" " " " "
	2	13	Consult with Egypt. members of the Hort. Tech. Comm.
	3	14	Collaborator on ADS horticulture activities
Robert Soost	1	11	Hort. Tech. Comm. Team Visit
	2	9	Citrus Activity
	3	10	Citrus Activity
Louis Grivetti	1	13	Community Development and Ag. Extension Team visit
Jerome B. Siebert	1	19	" " " "
Alan Richards	1	27	" " " "
	2	24	Econ. Subproject Ag. Employment Labor Supply in Rural Egypt
	3	13	Consult with Egypt. counterparts on Ag. Labor Supply
Elias Tuma	1	30	Community Dev. And Ag. Extension Team visit

Appendix Table C: (continued)

<u>Name of Traveller</u>	<u>Trip No.</u>	<u>Number of Days</u>	<u>Purpose of Trip</u>
Phil Martin	1	24	Econ. Subproject Ag. Employment and Labor Supply in Rural Egypt
	2	14	Food Security Study
Kamal El-Zink	1	22	Study of Cotton Seed Delinting Processing in Egypt
Hudson Hartmann	1	14	Feasibility Study of Olive. Propagation, Rootstock and Varieties
William Sims	1	12	Tomato Activity Prelim. Visit
	2	18	Tomato Activity Progress Follow-u
	3	13	" " " "
Lawrence Rappaport	1	21	Hort. Tech. Comm. Business
	2	8	" " " "
Leon Garyon	1	21	Ornamental Horticulture Activity
Michael Reid	1	23	Assess potential for Egyptian Prod. of cut flowers for market
	2	10	Ornamental Activity
Anton Kofranek	1	19	Assess potential for Egyptian Production of cut flowers for export market
	2	10	Floriculture Production Activity
H. H. Laidlaw	1	14	Bee Genetics Prelim. Visit
	2	3 months	Three-month stay in Egypt in connection with Bee Genetics stud
Rob Page	1	3 months	" " " " "
William W. Henderson	1	14	Conduct a diagnostic and evaluation study of the Egyptian Agricultural Statistics
Nathan Koffsky	1	14	" " " " "
Gordon Mitchell	1	17	Collaboration on the Hort. Subproject
Adel Kader	1	17	" " " "

Appendix Table C: (continued)

<u>Name of Traveller</u>	<u>Trip No.</u>	<u>Number of Days</u>	<u>Purpose of Trip</u>
Alexander Sarris	1	17	Attend meeting of the Econ. Tech. Committee
John Rowntree	1	15	Member of the Econ. Tech. Comm.
Tom Carroll	1	10	Attend Simulation Conference sponsored by UC/Egypt Project in conjunction with Michigan State University
Harold Carter	1	14	Member of the Econ. Tech. Comm. meeting in Cairo
Ben French	1	14	" " " " " "
Richard Blanchard	1	34	Research Feasibility of creating a central library
Anthony Bywater	1	1	Feasibility Study - Livestock
Beannie Osburn	1	14	" " "
Ron Voss	1	9	Feasibility Study for Onions and Garlic
Bill Rains	1	1	Confer on Bio Salinity Conference
James C. Ingram	1	1-1/2 months	Pricing Policy Study Econ. Subproject
	2	28	Policy Studies
Richard McCapes	1	6	Confer on potential poultry health project involving U.S./ Egypt and Israel
Robert Weaver	1	8	Grapes Activity
Richard Simmons	1	17	Potential Marketing
	2	8	" "
Dr. Alain DeJanvry	1	14	Food Security Study
Dr. Antle	1	8	Agricultural Policy
	2	18	" "

Appendix Table C: (continued)

<u>Name of Traveller</u>	<u>Trip No.</u>	<u>Number of Days</u>	<u>Purpose of Trip</u>
Richard Green	1	8	Price Policy
	2	11	" "
Del Gardner	1	8	Price Policy
	2	11	" "
Gustafson	1	8	Water Resources
Clyde Elmore	1	10	Weed Control
Ruth Shea	1	10	Administration
Robert Smith	1	11	Sheep Fertility Project
George Nyland	1	15	Mango Activity
Bernard Schweigert	1	11	Food Science Technology
Bor Luh	1	11	" " "
Walter Dunkley	1	11	" " "
Ivan Thomason	1	14	Integrated Pest Management
Nick Toscano	1	14	" " "
Burton	1	14	" " "
Andy Gutierrez	1	14	" " "
Wendell Kilgore	1	17	" " "
Richard Spanogle	1	5 months	Agricultural Law
Hiroimitsu Kareda	1	7	Confer on Price Policy Study
Charles Hess	1	8	JPPB Meeting
Elmor Learn	1	8	" "
Pete Peterson	1	8	Rice Project
	2	5	" "
Fred Hill	1	15	Negotiating the Contract
	2	8	JPPB Meeting
Dennis Hall	1	8	Plant Pathology
Steve Sibbett	1	13	Olive Activity

Appendix Table C: (continued)

<u>Name of Traveller</u>	<u>Trip No.</u>	<u>Number of Days</u>	<u>Purpose of Trip</u>
Slyvia Lane	1	14	Food Consumption in Rural Egypt
Carlos Benito	1	14	" " " " "
Eric Monke	1	8	Case Study of Egyptian Cotton (Cotton Markets and Policy)
Todd E. Petzel	1	8	" " " " "
<hr/>			
Totals 68	94	1,394	

Notes: Average length of trip is 14.8 days.

Source: Data provided by Pierre Loiseaux,
UC/D, January 20, 1981.

APPENDIX D.

EGYPTIAN TRAVEL TO UC/D SPONSORED BY ADS

Appendix Table D. Egyptian Travel to the University of California at Davis Sponsored by ADS

(January 1979 to January 1981)

<u>Traveler's Name</u>	<u>No. of Days</u>	<u>Purpose of Trip</u>
Dr. Abdel Azim El-Gazzar	8	Attend Joint Planning & Policy Meeting in Davis
Dr. Ahmed Goueli	8	" " " "
Dr. Claron Hesse	8	" " " "
Dr. M. Abu Zeid	8	" " " "
Dr. M. M. Dessouki	8	" " " "
Dr. M. Taha Eid	8	Attend Joint Planning & Policy Meeting in Davis
Dr. Sayed A. Gihad	8	" " " "
Dr. Said Dessouki	8	" " " "
Dr. S. Gaballah	8	" " " "
Dr. T. E. Shehata	8	" " " "
Dr. Abbas El-Itriby	8	Attend Joint Planning & Policy Meeting in Davis
Dr. M. K. Hindy	8	" " " "
Dr. Abdel Fattah Moursi	8	" " " "
Dr. Ahmed G. Abdel Samie	8	" " " "
Dr. Zaki Shabanah	8	" " " "
Dr. Amin El-Gamassy	8	Traveled only from Washington to Davis
Dr. Mahmoud El-Barkouky	24	Consulted with various individuals in Pomology, etc.
Dr. Mostafa Fadl	3 months	Study Methods of mist propagation Olive root stocks
Mr. Hamdi El Saied	3 months	" " " " "
Miss Ikram El Din	3 months	" " " " "
Dr. Abdou	1st Part of Dec.	Price Policy Project
Alaa Bondok	6 months	Tissue Culture
Hosni El-Hennawy	6 months	" "
Mr. Tolba	10	Citrus
Nabil Habashi	1 year	Agricultural Economics
Mohamed Gomaa	1 year	" "
Kamal Salah El-Kheshen	6 months	Agricultural Economics Marketing

Appendix Table D. (cont')

<u>Traveler's Name</u>	<u>No. of Days:</u>	<u>Purpose of Trip</u>
Tarek A. Moursi	4 years	Marketing and Pricing Analysis
Mohamed Fayek	4 months	Deciduous Fruit Activity
Mrs. Kamla Mansour	3 months	Post Harvest Activity
Talaat Kabeel	3 months	" " "
Mr. El-Serafi	8	UC/D Animal Science Dept.
Ahmed Kamel	1 week	Grape Activity
Ali El-Bassel	5	Agriculture
George Stino	6 months	Deciduous Fruits
M. M. El-Azzouni-	22	American horticultural Soc. Annual Meeting
Sayed Azzouzz	22	" " "
Sayed Nassar	22	" " "
Ahmed Radwan	22	" " "
Abdel Maksoud	22	" " "
Y. Mohieldin	15	Economics Technical Committee Meeting
A. Goueli	15	" "
M. K. Hindy	15	" "
El-Shennawi	15	" "
El-Yamani	15	" "
Mr. Khedr	15	Economics Technical Committee Meeting
Mr. Shehata	15	" "
El-Kholi	15	" "
Mr. J. Rowntree	15	" "
Dr. Youssef Ibrahim	10	Food Science & Technology
Dr. Hassan M. Hassan	10	" " " "
Dr. Fathallah El-Wakeel	10	" " " "
Dr. T. Shehata	10	" " " "
Ibrahim Moharrem	2 weeks	Economic Agricultural Marketing
Mr. Okasha	6 months	Land and Water Allocation (Economics)

Number of trips = 1 only in each case

Length of stay itemized in DAYS unless indicated otherwise

APPENDIX E.

TRAVEL TO EGYPT SPONSORED BY ADS PROJECT

(11/80 - 1/81)

Appendix Table E.: Travel to Egypt Sponsored by ADS Project
(11/80 - 1/81)

<u>Date</u>	<u>Days</u>	<u>Name of Traveler</u>	<u>To</u>	<u>From</u>	<u>Purpose</u>
11/80		Dr. Richard Simmons	Cairo	England	Potential Marketing
11/16/80 11/30/80	14	Dr. Alain DeJanvry	Cairo	Paris	Food Security Study
11/20/80 12/28/80	8	Dr. Alex Sarris	Cairo	Berkeley	Food Security Study
11/22/80 12/ 5/80	13	Dr. Phil Martin	Cairo	Europe	Rural Labor Market
11/20/80 12/14/80	14	Dr. Nyland	Cairo	Davis	Mango
12/ 2/80 12/13/80	11	Dr. Child	Cairo	Davis	Regular Visit
12/ 5/80 12/19/80	14	IPM Team	Cairo	Davis Riverside Berkeley	IPM Project
12/11/80 1/ 8/81	28	Dr. Ingram	Cairo	North Carolina	Policy Study
12/11/80 12/21/80	9	Food Science	Cairo	Davis	Food Science Project
12/13/80 12/24/80	11	Del Gardner	Cairo	Davis	Price Policy
12/13/80 12/24/80	11	Richard Green	Cairo	Davis	Price Policy
12/18/80 1/ 4/81	16	John Antle	Cairo	Davis	Agricultural Policy
12/ /80 1/ 1/81		Richard Spanogla	Cairo	New York	Agricultural Law

Appendix Table E: (continued)

<u>Date</u>	<u>Days</u>	<u>Name of Traveler</u>	<u>To</u>	<u>From</u>	<u>Purpose</u>
12/ 1/80 12/18/80	17	Todd Petzel	Cairo	Davis	Econ- Cotton Study
12/ 1/80 12/18/80	17	Eric Monke	Cairo	Davis	Econ- Cotton Study
12/28/80 1/15/81	17	Dr. Pete Catlin	Cairo	Davis	Deciduous Fruits
12/30/80 1/13/81	14	Steven Sibbett	Cairo	Davis	Olive Propagation

APPENDIX F.

PERSONS INTERVIEWED BY THE EVALUATION TEAM

Appendix Table F: Persons Interviewed by
the Evaluation Team

Persons interviewed in Davis, California:

<u>Person</u>	<u>Date interviewed</u>
1. Dr. Frank Child, UC/Davis	12/18/80
	12/19/80
2. Dr. A. G. Marr, UC/D	12/18/80
3. Dr. Elmer Learn, UC/D	12/18/80
4. Dr. Harold Carter, UC/D	12/18/80
5. Dr. Lawrence Rappaport, UC/D	12/18/80

Persons interviewed in Washington, D.C.:

1. Dr. Robert Morrow, NE/TECH/AD	12/15/80
2. Dr. John Swanson, NE/TECH/AD	12/16/80
3. Robert Sperling, NE/Egypt Desk	12/14/80

Persons interviewed in Egypt: *

1. Dr. Sayed Hassan Nassar Under Secretary, MinAg	
2. Dr. Sayed Azzouz, Head, Horticulture Institute Agricultural Research Institute	
3. Dr. Hassan Khedr, MOA, Agricultural Economics Department	1/20/81
4. Ahmad Goueli, Shawky Imam, Sonia Med Ali, Ibrahim Soliman Zagazig University	1/21/81
5. Dr. Abdelaziz Khalif-Allah, Professor of Horticulture Alexandria University Citrus Activity	1/17/81
6. Pierre Loiseaux, UC/D	
7. Dr. Ronald Voss, UC/D	
8. Dr. John Rowntree, UC/D	
9. Dr. Talaat Shehata, UC/D	
10. Mr. Donald Brown, AID/Cairo	1/15/81

Appendix Table F.

(cont')

11. Dr. Mahmoud El Barkouki	1/14/81
12. Dr. Mohamed El Azuni, Cairo University	1/14/81
13. Dr. Sayed Azzouz, Horticultural Research Institute	1/14/81
14. Dr. Kamel Hindy	1/12/81 12/14/80
15. Dr. Ahmad Goueli	1/13/81
16. Dr. Youssef Wally	1/11/81 12/14/81
17. Dr. Yehia Mohieldin	1/13/81
18. Dr. Azzouni	
19. Dr. Hassan Khidr	12/13/80 12/31/80
20. Mr. Ikram Yussuf	12/13/80
21. Herbert Kriesel	12/13/80
22. Essam Muntasse	12/15/80
23. Nick Hopkins	12/15/80
24. Piero Bronzi Agriculture/Ford Foundation	12/16/80
25. Salah al-Abd Deputy Minister Ministry of Land Reclamation	12/16/80
26. Mohamed Abu Zeid Ministry of Irrigation	12/17/80
27. Lutfy Abd al-Azim Editor, Economics, El Ahram	12/17/80
28. Henry Bruton Ford Foundation Economics Advisor, Minister of Economy	12/18/80
29. Hassan Khidr	12/21/80
30. Osman al-Kholie	12/22/80
31. Mustapha Gabali Former Minister of Agriculture Member National Academy of Science and Consultant to Minister of Land Reclamation	12/22/80
32. Dr. Aly Salmi Director Development Research and Technological Planning Center	12/23/80
33. Dr. Amr Mohie el-Din	12/23/80

Appendix Table F. (cont'd)

34.	Dr. Said Gaballa Former Minister of Planning, Former Director, Agricultural Economics Subproject	12/24/80
35.	Dr. Ahmad Goueli	12/25/80
36.	Dr. Azzouni	12/27/80
37.	Dr. Mahmoud Nazir Director, Agricultural Census	12/31/80

*Dates indicate first interview, many were interviewed more than once.

APPENDIX G.

SYSTEM OF SALARY INCENTIVES

for ADS PROJECT

Appendix Table G. : System of Salary Incentives
(100% of Time) for Agricultural Development Systems Project

<u>No.</u>	<u>Incentive Level to</u>		<u>Per Month</u> <u>L.E.</u>	<u>Per Year</u> <u>L.E.</u>
1	Co-Director ^{a/}	(Ph D)	600	7200
2	Subproject Director ^{a/}	(Ph D)	500	6000
3	Chairman of Technical Committee	(Ph D)	500	6000
4	Team Leader	(Ph D)	450	5400
5	Administrative Officer		450	5400
6	Principal Investigator	(Ph D)	400	4800
7	Station Director		250-400	3600-4800
8	Investigators:			
	Senior	(Ph D)	200-300	2400-3600
	Junior	(M.Sc.)	200-300	2400-3600
9	Technical Assistant	(B.Sc.)	120-150	1440-1800
10	Laboratory and Library Supervisor		80-100	960-1200
11	Laboratory and Library Assistant		40- 50	480- 600
12	Clerical Supervisor		50- 60	600- 720
13	Clerical Assistant		40- 50	480- 600

Notes: a/ Paid at 100% of full-time rate;
all other personnel are paid a maximum
of 50% of full-time rate.

Source: Provided by ADS Project Co-Director,
January 25, 1981.

APPENDIX H.

RESEARCH ACTIVITIES CURRENTLY SPONSORED

BY ADS PROJECT (as of 12/16/80)

Appendix Table H. : Research Activities Currently
Sponsored by ADS Project

(as of 12/16/80)

Horticulture:

1. Identification and Control of the Limiting Factors which cause Low Yield in Citrus.

To improve the production of citrus by introducing new high-yielding varieties by improving citrus rootstock and by the identification and correction of limiting factors which have caused low yields.

2. Integrated Research for Increasing Production and Improving Quality of Tomatoes in Egypt.

Select and breed tomato cultivars adapted to Egyptian environmental conditions, resistant to fusarium wilt, nematodes and some virus diseases. Produce fruit of good keeping quality and of high nutritional value and to yield a large crop suitable for local market, export and canning.

3. Deciduous Fruits.

Introduction of promising fruits, primarily stone and pome cultivars and the screening of rootstocks for increased tolerance to waterlogging and to salinity.

4. Mango Inflorescence Malformation Cause and Control.

Malformation adversely affects Egyptian trees and seriously limits production of mangoes. The activity consists of an extensive number of studies falling into the following classifications: Pathological, nematodes, entomological, management practices, growth regulators, and the selection of tolerant trees.

5. Integrated Research for the Improvement of Garlic Production in Egypt.

Select and improve strains of garlic. Prevent and control several production and post-harvest diseases. Increase yield through improved cultural practices, seed handling and storage, and virus-free seed.

6. Integrated Research for the Improvement of Cucurbit Varieties.

This research is designed to develop new varieties resistant to fungus diseases and characterized by

Appendix Table H. (cont')

good adaptability to the environment, good fruit quality and high yield. The activity also seeks to develop and improve techniques for improved cultural methods.

7. Post-Harvest Activity.

Examination of selected fruits and vegetables at key points in the distribution process from farm to market to determine the extent of damage and disease and to measure the weight and maturity at each point. Study protective packaging and refrigerated or humified storage practices.

Economics:

8. Agricultural Employment and Rural Labor Supply.

To generate and analyze data on the supply of rural labor. A detailed study of eight villages' experience with labor use will be made and analyzed. The data will be collected by survey conducted by trained team members. The villages studied will be selected by size and distances from major cities.

9. Assessment of Government Distribution and Price Policies for Principal Subsidized Food Items in Egypt.

To study the existing price and distribution policies within the following categories: 1) subsidized and strictly rationed foods, (Sugar, cooking oil, tea and rice); 2) subsidized and semi rationed, (beans, lentils, imported frozen meat and poultry and flour); 3) subsidized but not rationed (bread). Hypothetical modifications of existing policies will be studied to see if they might be more efficient or more equitable and, if so, what sort of implementation would be needed.

10. Agricultural Pricing Policies and the Balance of Trade.

A study of the effect of price policies on Egypt's exports, imports and the balance of trade. An analysis and evaluation of price policies and of any market distortions which may effect output, growth rates, increased exports and reduced imports.

Appendix Table H. (cont')

11. The Impact of Partial Market Pricing on Land and Water Allocation in Egypt.

A study to explore and investigate the effects on cropping patterns; land and water resource allocation which might result from change from an administered structure to a market allocation framework.

12. Egypt's Potential for Supplying Fresh Out-of-Season Vegetables to EEC and Near East Markets.

The study is designed to identify fresh vegetables which Egypt could economically produce for export to European markets and the seasons during which these exports would be most feasible. These demand characteristics will be weighed against marketing costs and other constraints affecting the distribution channels.

13. Food Consumption of Low-Income Rural Household.

Study the energy and protein intakes as compared with energy and protein requirements and the cost of filling the gap, if any, between intakes and requirements. Study household budget statistics and to compare these facts with present national food policies.

14. Food Security and Agricultural Price Policy.

To assess the income distribution effects of different agricultural price policies on the achievement of food security and to study the trade-offs between food self-sufficiency and foreign exchange earnings. The study will examine : 1) Detriments of agricultural price policy; 2) relation of agricultural price policies to real wages, rents, profits and employment levels; 3) effect of agricultural price policy on income distribution; 4) supply response to price in agriculture; and 5) external constraints on food security.

15. Livestock and Livestock Products in the Egyptian Economy.

To develop data on meat and milk animals and their products; to study production options and input-output relationships; and to assess marketing patterns and possible improvements under feasible new government policies.

Appendix Table H. (cont')

16. Detriments of the Demand for Mechanization in Egyptian Agriculture.

An econometric analysis of the effects of mechanization on fertilizer use, yields and crop patterns to determine whether use of machinery increases output or decreases costs or both. The work will seek to find answers to three important questions: 1) the optimal technology for different size farms; 2) the effect of changing livestock prices on mechanization demand; and 3) the effect of fuel subsidies and credit rationing on machinery demand. Also a study and analysis of the hire market and regional differences, if any.

17. The Interaction of Demand Supply, and Government Policy: A Case Study of Egyptian Cotton.

Between twenty and twenty-five percent of Egypt's foreign exchange earnings are derived from cotton. This study will attempt to identify the international values of different staple lengths in order to find the optimal varietal mix. This will be done by examining the resources used in producing different varieties. The costs and benefits in different techniques of processing and aproduction, and the effects of existing or possible governmental policies on net gains.

Other Activities:

18. Development of a Small Power Unit for Water Lifting.

A study to determine the possibility of developing low horsepower output power units, which do not use petroleum fuel, for water lifting in Egypt. An appropriate design will be selected which can be locally built and maintained. It will then be tested and further developed on location in Egypt.

19. Agricultural Law Study.

A study of the agricultural laws and regulations of Egypt in order to prepare a summary for scientists working in the various activities. The work involves finding materials in English and in certain instances having translations made. The study is expected to be finished by the summer of 1981.

Appendix Table H. (cont')

20. Thermal Detection of Ovulation and Pregnancy in the Ewe.

The activity is directed to the early determination of pregnancy and ovulation by inexpensive means. This will allow steps to be taken to prevent abortion due to various environmental conditions and secondly to allow the farmer to save costly feed by separation of the pregnant from the non-pregnant ewes.

21. Breeding Improved Honey Bees.

Organized research and education in beekeeping and queen rearing through controlled mating of queens and employment of artificial breeding methods. Education is effected by a group of workers who travel around instructing at the local level. The activity also engages in selective breeding for increased production of honey, wax and pollen as well as education and research in the diseases of honey bees.

22. Mist Propagation of Olives.

This activity is designed to use mist propagation to rapidly develop a large scale olive industry. The hope is to substitute mist propagation for the present methods of T budding and approach grafting in appropriate situations and thereby make substantially larger quantities of young nursery trees available.

Feasibility Studies not Incorporated in Foregoing Activities

- | | |
|---|--|
| 1) Statistics Data Base | Developed as a separate project funded by AID/USDA. |
| 2) Extension and Rural Development | More information needed. No action taken. |
| 3) Improvement of Agricultural Library in Egypt | Developed to a separate activity/project. Presently under consideration. |
| 4) Development of Animal Production in Egypt | Developed to a separate activity/project. Presently under consideration. |
| 5) Development of Food Science Activity | Current. Waiting Report. |
| 6) Development of IPMC Activity. | Current. Waiting Report. |

Prepared from material supplied by ADS Project office, 12/80.

APPENDIX I.

BACKGROUND ON EVALUATION TEAM

BACKGROUND ON EVALUATION TEAM

Team Leader

Richard N. Blue, (Ph.D. in Government and International Relations.) Currently Chief, Studies Division, Office of Evaluation in Program and Policy Coordination Bureau, AID, Dr. Blue was previously Director of the Development Studies Program, AID. Before joining AID in 1975, he was associate Professor of Political Science and South Asian Studies at the University of Minnesota. He is the author of several books and articles on rural development in India and Southern Africa.

Team Members

Richard Fraenkel, Program Officer for Agriculture and Rural Development, USAID/Cairo. Previously he was a staff member in the departments of agricultural economics at the University of Minnesota and Purdue University.

George Gardner (Ph.D., Agricultural Economics and Rural Sociology.) Currently a Development Officer with the Social Analysis Division of the Near East Bureau, A.I.D., Washington. Dr. Gardner previously worked with agricultural development projects in Chile, Nicaragua, Mexico, Guatemala and El Salvador. His international development experience dates from 1966. He has taught and conducted research at three U.S. land-grant universities.

Team Members (cont')

Arthur T. Mosher, Ph.D. agricultural economics.

19 years at Allahabad Agricultural Institute, India.

Two-year assessment leading to Technical Cooperation in Latin American Agriculture, Univ. of Chicago Press, 1946;

Two years conducting Comparative Extension Seminar, Cornell University; 16 years President, Agricultural Development Council, promoting training in human and economic phases of rural development in South and Southeast Asia.

Author books and articles on agricultural and rural development.

John Waterbury, Ph.D. in Political Science has traveled widely in the Middle East and resided in Egypt as staff member for the American Universities Field Staff for several years. He is currently Professor of Political Science at the Princeton University Woodrow Wilson School. He is author of several books and articles on the political economy of Egypt.

*Yussef Wally, Ph.D. in Horticulture. Dr. Wally has served as advisor to several Ministers. Currently he is Professor of Horticulture at Ein Shams University, Chairman of the Agricultural Development Committee for Foreign Aid and Consultant to the Minister of Agriculture.

*Dr. Wally met with the team and reviewed findings and Judgements. He did not personally conduct interviews.

APPENDIX J.

NOTES ON EVALUATION APPROACH

Appendix J: Notes on Evaluation Approach

This interim evaluation was conducted during December of 1980 and January of 1981 by a five person team; two from AID/W, one from USAID/Cairo and two consultants. In addition, Dr. Yussef Wally, advisor to the Ministry of Agriculture, Arab Republic of Egypt was an ex officio member of the team-- and reviewed and corrected errors of fact and judgement before the report was completed.

Two factors constrained the use of any formal evaluation method; the Project was still at the input stage due to implementation problems, and there was little base line data other than retrospective statements. Thus much of the attention of the team was focused on planning documents, background materials, and interviews with principal participants in the administration of the Project. Discussions were held in December with project officers at the University of California, and in Egypt by an advance member of the team. In January the full team arrived and devoted two more weeks to interviews, document analysis and field visits. Five horticultural research sites were visited in the Lower Nile Valley. Interviews were conducted with forty project participants.

Writing assignments were given out and drafting of the report began January 23. The draft report was formally presented to the USAID/Cairo Mission Director January 28, 1981. Revisions were completed January 30, 1981. The report represents the consensensus of the team.